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ABSTRACT

This report describes the Roots & Wings (R&W) program. It presents the research on R&W carried out to date and discusses R&W's impact on research, development, and evaluation for school reform in general. The program is an extension of the Success for All whole-school reform model. R&W took the existing reading, writing, language arts, preschool, tutoring, family support, and assessment components of Success for All, upgraded them, and developed a training infrastructure. The booklet outlines the R&W program and offers details on its various components: early learning programs, reading programs, reading tutors, writing and language arts, mathematics, social studies and science, family support and integrated services, after-school programming, site-based management, facilitators, and special education. Program evaluations of R&W are offered for the pilot program in St. Mary's County, Maryland, and for the first school to implement the program outside of Maryland, in San Antonio, Texas. The report concludes that R&W offers schools a comprehensive means of implementing research-based reforms in all academic subjects and all grade levels and shows what can be achieved in high-poverty schools willing to undergo and sustain whole-school reforms. (Contains 20 figures that chart program successes.) (RJM)

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CRESPAR

ROOTS & WINGS

Effects of Whole-School Reform on Student Achievement

Robert E. Slavin
Nancy A. Madden

Report No. 36 / May 1999

CENTER FOR RESEARCH ON THE EDUCATION OF STUDENTS PLACED AT RISK
Johns Hopkins University & Howard University

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Success For All Foundation

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The Center

Every child has the capacity to succeed in school and in life. Yet far too many children, especially those from poor and minority families, are placed at risk by school practices that are based on a sorting paradigm in which some students receive high-expectations instruction while the rest are relegated to lower quality education and lower quality futures. The sorting perspective must be replaced by a "talent development" model that asserts that all children are capable of succeeding in a rich and demanding curriculum with appropriate assistance and support.

The mission of the Center for Research on the Education of Students Placed At Risk (CRESPAR) is to conduct the research, development, evaluation, and dissemination needed to transform schooling for students placed at risk. The work of the Center is guided by three central themes — ensuring the success of all students at key development points, building on students' personal and cultural assets, and scaling up effective programs — and conducted through seven research and development programs and a program of institutional activities.

CRESPAR is organized as a partnership of Johns Hopkins University and Howard University, in collaboration with researchers at the University of California at Santa Barbara, University of California at Los Angeles, University of Chicago, Manpower Demonstration Research Corporation, University of Memphis, Haskell Indian Nations University, and University of Houston-Clear Lake.

CRESPAR is supported by the National Institute on the Education of At-Risk Students (At-Risk Institute), one of five institutes created by the Educational Research, Development, Dissemination and Improvement Act of 1994 and located within the Office of Educational Research and Improvement (OERI) at the U.S. Department of Education. The At-Risk Institute supports a range of research and development activities designed to improve the education of students at risk of educational failure because of limited English proficiency, poverty, race, geographic location, or economic disadvantage.

Abstract

In recent years, there has been a remarkable transformation in the movement to reform America's public schools. A rapidly growing type of reform is the widespread dissemination of replicable whole-school reform models with specific components, materials, professional development, and staffing patterns. The whole-school reform programs currently in use vary in the degree to which design teams provide specific guidance and materials to schools.

The most widely used of the relatively structured whole-school reform models is Success for All, a comprehensive program that focuses on reading, writing, and language arts. In 1992, this comprehensive reform approach was expanded into the main areas of the elementary curriculum not addressed by Success for All — mathematics, science, and social studies. The existing reading, writing, language arts, preschool, tutoring, family support, and assessment components of Success for All were upgraded, and the training infrastructure was built up to serve larger numbers of schools with quality and integrity. The full model, incorporating all major subjects, is called Roots & Wings.

This report describes the Roots & Wings program, presents the research on the program carried out to date, and discusses the implications of this process of research, development, and evaluation for school reform in general.

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Introduction

In recent years, there has been a remarkable transformation in the movement to reform America's public schools. While reforms based on standards, assessments, accountability, and such governance experiments as charters and vouchers still dominate policy debates, a quite different type of reform is growing very rapidly. This is the widespread dissemination of replicable whole-school reform models, programs adapted to one degree or another to meet local needs but with specific components, materials, professional development, and staffing patterns intended to be implemented across a broad range of circumstances. These models are created, evaluated, and disseminated by organizations set up for this purpose, usually within universities or other non-profit organizations. Examples include James Comer's (Comer et al., 1996) School Development Program, Henry Levin's (Hopfenberg & Levin, 1993) Accelerated Schools, and our own Success for All program (Slavin, Madden, Dolan, & Wasik, 1996), as well as eight programs developed under funding from the New American Schools Development Corporation, or NASDC (see Stringfield, Ross, & Smith, 1997). These and other whole-school programs are collectively used in more than 6,000 U.S. schools (Education Commission of the States, 1998). They provide a wide range of alternatives from which school staffs may choose. Almost all require a buy-in process that includes a positive vote of a supermajority of school staff, typically 80%.

The movement toward whole-school reform has been greatly accelerated by the 1997 passage of legislation introduced by Congressmen David Obey and John Porter establishing grants to schools to enable them to adopt proven, comprehensive reform designs (Slavin, 1998). This Comprehensive School Reform Demonstration, or CSRD, provides grants of at least $50,000 per year for up to three years to adopt models that touch upon all aspects of school functioning, from curriculum and instruction to professional development, assessment, and parent involvement. The grant process, administered by state departments of education, is underway as of this writing. Among the first ten states to make awards, nine have focused primarily on well-established, externally developed models, such as Success for All, Accelerated Schools, and New American Schools designs; only Illinois has concentrated its CSRD funds on locally developed programs.

The CSRD experiment, which is providing $145 million in grants to approximately 2500 mostly high-poverty schools in 1998-99, was intended in large part to serve as a pilot for reform of the vastly larger Title I program, due to be reauthorized in 1999. In particular, adoption of whole-school reform designs could be encouraged in the 20,000 schools that qualify for schoolwide status under current regulations (i.e., at least 50% of their students qualify for free or reduced-price lunches).

The whole-school reform programs currently in use are very different from one another, but vary in particular along one key dimension, the degree to which design teams provide specific guidance and materials to schools as opposed to expecting school staffs to substantially co-construct their approaches and use existing or homemade student materials. At one extreme on this dimension, Direct Instruction (Adams & Engelmann, 1996) and Success for All (Slavin et al., 1996) provide the most structure and the most complete sets of student materials, teacher's manuals, and other supports, and these models have been the most extensively and successfully evaluated of all whole-school models (see Herman, 1999). At the opposite extreme, programs such as Theodore Sizer's (1992) Coalition of Essential Schools, Accelerated Schools, and the School Development Program, provide general principles of schoolwide reform and extensive professional development to help schools put these principles into practice, but do not provide student curriculum materials or specify instructional strategies in detail.

Success for All

The most widely used of the relatively structured whole-school reform models is Success for All, a comprehensive program that focuses on reading, writing, and language arts in the elementary grades. Success for All provides well-structured curriculum materials and instructional strategies for prekindergarten, kindergarten, grades 1-6 reading, writing, and language arts, one-to-one tutoring for primary-grades children struggling in reading, and extensive family support services. Begun in 1987, Success for All is currently used in more than 1100 elementary schools, and will be in more than 1700 schools by September, 1999. Most of these are high-poverty, Title I schoolwide projects in cities and rural areas throughout the United States.

In longitudinal studies conducted in 15 school districts, involving thousands of students, students in Success for All schools have consistently performed better than those in matched control schools on measures of reading performance, writing, language arts, special education placements, promotions, and other variables (see Slavin et al., 1996, for a summary of evaluations). Most of these evaluations were carried out by researchers other than the developers.

Roots & Wings

In 1992, we received a grant from the New American Schools Development Corporation (NASDC) primarily to enable us to extend our comprehensive reform approach

into the main areas of the elementary curriculum not addressed by Success for All: mathematics, science, and social studies. The NASDC grant also enabled us to significantly upgrade our existing reading, writing, language arts, preschool, tutoring, family support, and assessment components, and to build up our training infrastructure to enable us to serve larger numbers of schools with quality and integrity. The full model, incorporating all major subjects, was called Roots & Wings.

This report describes the Roots & Wings program, presents the research on the program carried out to date, and discusses the implications of this process of research, development, and evaluation for school reform in general.

Components of Roots & Wings

Schools implementing all aspects of Roots & Wings typically phase them in over a three-year period. In the first year, they implement all components of Success for All: prekindergarten, kindergarten, grades 1-6 reading, writing, and language arts, tutoring, family support, and other elements. In the second year most implement MathWings, the grades 1-6 math program used in Roots & Wings, and in the third year, WorldLab, the grades 1-6 social studies/science curriculum. The order of introduction of program components may vary, and schools may take longer than three years to implement all components; also, many schools implement one or two of the major components but not the others. However, the components of the complete model are as follow (see Slavin, Madden, & Wasik, 1996).

Early Learning Programs (Prekindergarten and Kindergarten)

Both the prekindergarten and kindergarten programs in Roots & Wings use a thematic approach to learning. The core of the thematic unit is based on either a science or social studies topic and the literature, writing, math, and literacy activities that correspond with and are integrated with each specific theme. For example, in a unit on plants, understanding the basic scientific concepts about plant growth is the general theme and the daily activities focus around this theme. The class may read *The Carrot Seed* (emphasizing concepts of print in this reading), plant a seed during center time, record the progress of plant growth in their plant journal, and sing "The Farmer Plants the Seed" as a finger play activity. The goal is to teach the children about plants and how they grow through meaningful activities that are interrelated around a common topic.

Examples of early learning units include Plants, Environment, "Special Me," Community Helpers, Multicultural Awareness, and Space. The units are designed to be resources for teachers as well as allow teachers the flexibility to input their own ideas in creative ways. Each unit contains a section on theme learning, literature, writing, math, center activities, cooking activities, music and motor activities, and phonemic awareness instruction. The theme learning sections contain the learning objectives that are presented in each unit. In the literature section, an extensive list of books along with a brief summary of each book is presented. This section also includes activities from the STaR program. STaR (Story Telling and Retelling) emphasizes oral language and memory skills as well as concepts of print. Teachers read books to children and then give them the opportunity to retell or act out the story, predict story outcomes, and answer questions about story structure. Writing activities are designed to be implemented both during center time as well as a special writing time which is integrated in the daily schedule. The math activities emphasize basic concepts such as counting, grouping, and matching, as well as problem solving activities including measuring and estimation. The center activities are designed to give the children the opportunity to have "hands on" experience. There are suggestions for a variety of centers including a dramatic play center, a reading center, a writing center, and a water activity. Cooking activities integrate math, reading, and writing activities. The music activities correspond to the theme and provide opportunities for the children to sing and do finger play activities. The phonemic awareness activities are frequently related to the music activities and include opportunities for playing with language and sounds.

In addition, each unit has a section on home activities and an individualized student assessment. A letter is sent home to parents when a new unit is beginning which explains what the unit is about and how the parents can help participate in home activities that are related to the unit. At the end of each unit, there are assessments that the teacher uses to determine the strengths and weaknesses of each child's performance in different areas of the unit. For example, the teacher can evaluate how well children understand the learning objective, how their writing has progressed, and how well they comprehend what is read to them.

All of the activities are developmentally appropriate and considerable emphasis is placed on child-initiated and cooperative activities. The goal is to encourage children to think and problem-solve with the guiding hand of the teacher.

Reading Programs

Roots & Wings uses reading curricula originally developed for Success for All. In Reading Roots, the K-1 reading program, reading teachers begin the reading time by reading

children's literature to students and engaging them in a discussion of the story to enhance their understanding of the story, listening and speaking vocabulary, and knowledge of story structure. At the early stages, the program emphasizes development of basic language skills with the use of Story Telling and Retelling (STaR), which involves the students in listening to, retelling, and dramatizing children's literature. Big books as well as oral and written composing activities allow students to develop concepts of print as they also develop knowledge of story structure.

Starting in mid-kindergarten, children are introduced to a series of phonetic mini-books. After teacher introduction, students read these books to each other in dyads. Letters and letter sounds are introduced in an active, engaging set of activities that begins with oral language and moves into written symbols. Individual sounds are integrated into a context of words, sentences, and stories. Instruction is provided in story structure, comprehension monitoring using specific comprehension skills, and integration of reading and writing. The family support team works to ensure that parents know how to reinforce this learning at home.

When students reach the second grade reading level, they use Reading Wings, an adaptation of Cooperative Integrated Reading and Composition (CIRC; Stevens, Madden, Slavin, & Farnish, 1987), with novels, trade books, anthologies, and other materials integrated with content that students are studying in other subjects. Reading Wings uses cooperative learning activities built around story structure, prediction, summarization, vocabulary building, decoding practice, and story-related writing. Students engage in partner reading and structured discussion of the stories or novels, and work toward mastery of the vocabulary and content of the story in teams. Story-related writing is also shared within teams.

In addition to these story-related activities, teachers provide direct instruction in reading comprehension skills, and students practice these skills in their teams. Classroom libraries of trade books at students' reading levels are provided for each teacher, and students read books of their choice for homework for 20 minutes each night. Home readings are shared via presentations, summaries, puppet shows, and other formats twice a week during "book club" sessions.

Reading Tutors

One of the most important elements of the Roots & Wings model is the use of tutors to promote students' success in reading. One-to-one tutoring is the most effective form of instruction known (see Wasik & Slavin, 1993). The tutors are certified teachers and paraprofessionals with experience teaching Title I, special education, and/or primary reading. Volunteers are often recruited to provide additional tutoring. Tutors work one-on-one with

students who are having difficulties keeping up with their reading groups. The tutoring occurs daily in 20-minute sessions. In general, tutors support students' success in the regular reading curriculum, rather than teaching different objectives. For example, the tutor works with a student on the same story and concepts being read and taught in the regular reading class. However, tutors seek to identify learning problems and use different strategies to teach the same skills and teach metacognitive skills beyond those taught in the classroom program.

Initial decisions about reading group placement and the need for tutoring are based on informal reading inventories that the tutors give to each child. Subsequent reading group placements and tutoring assignments are made based on curriculum-based assessments given every eight weeks, which include teacher judgments as well as more formal assessments. Six- and seven-year-olds receive priority for tutoring, on the assumption that the primary function of the tutors is to help all students be successful in reading the first time, before they fail and become remedial readers.

Writing and Language Arts

The Roots & Wings writing and language arts program has two stages. Writing from the Heart teaches writing using invented spelling with first and second graders. It emphasizes helping students take on a role as authors to describe their perceptions, feelings, and ideas. Beginning in third grade, Writing Wings then presents a more elaborate approach to writing emphasizing the use of four-member peer response groups. In this program, students help each other plan, draft, revise, edit, and publish compositions. Language arts instruction is woven into the context of composition, with special lessons in style (e.g., "grabbers" and avoiding "and" disease), mechanics (e.g., capitalization, punctuation), and usage (e.g., complete sentences, subject-verb agreement). These lessons are presented according to students' needs, and are immediately integrated into the editing process as soon as they have been taught.

The writing program in Roots & Wings is closely integrated with the other subjects students are studying. It may be taught during a combined reading/language period and/or during WorldLab. When students are reading *Treasure Island*, they also write adventure stories. When they are studying the Civil War, they write broadsides against slavery or for states' rights.

Mathematics

MathWings, the Roots & Wings mathematics program for grades 1-5, is based on the standards of the National Council of Teachers of Mathematics. A mathematics program to

prepare students for life in the twenty-first century needs to actively involve students in the conceptual development and practical application of their mathematics skills. The MathWings program reflects a balance of solid mathematical conceptual development, problem solving in real-world applications, and development of necessary mathematics skills.

Students enter school with a great deal of mathematical knowledge. They know about combining and separating, halves and wholes, and so on. What they need is a bridge between their pre-existing knowledge and the formal representation of this knowledge in mathematical symbols. This requires the use of manipulatives, demonstrations, and discovery to help students build mathematical understanding. MathWings uses cooperative learning at all age levels as its vehicle while incorporating problem solving in real situations, skill practice and reinforcement for efficiency in application, calculator use, alternative assessments, writing, connections to literature and other disciplines, and application to the students' world and personal experiences. Students are always individually accountable for their own learning, and are frequently assessed on their progress in understanding and using math (see Slavin, 1995).

Primary and Intermediate MathWings are designed to be developmentally and mathematically appropriate. Although both are based on the NCTM standards and cooperative learning philosophy and techniques, there are some differences between the two levels which reflect the differences in the students at those ages.

Primary MathWings uses a constructivist approach to help students connect the math skills they already have when they come to school to the mathematical concepts and skills they need to learn. All the units in the primary level are whole-class units. These provide carefully planned activities and questions from the teacher to guide the students as they explore and develop basic mathematical concepts and skills. There are two main components in the Primary MathWings structure: 15-Minute Math and Action Math whole-class lessons.

15-Minute Math is a daily interactive calendar routine with activities for building fluency in real-world math skills such as patterning, regrouping, money, time, and number sense.

The daily 60-minute Action Math lessons are framed by check-in and reflection routines which provide review for mastery and warm-up at the beginning of class and a summary of key concepts and logbook for closure at the end of class. The lessons themselves involve the students in active instruction to introduce an activity, concept, or skill, a teamwork activity to develop and/or apply the concept, and direct instruction to emphasize and elaborate the math concept or skill involved in the teamwork activity.

Intermediate MathWings is designed to extend students' concepts and skills into more complex math. Intermediate MathWings uses a guided concept development approach as an appropriate tool for the exploration and development of the concepts, algorithms, and language of this more complex math. At this level, students have also developed and differentiated their math skills, so Intermediate MathWings includes not only Action Math whole-class units but also Power Math individualized units.

Action Math units are the heart of Intermediate MathWings. They help all students, regardless of their background and ability, experience the breadth, depth, and beauty of mathematics. In these units, students explore concepts, construct understanding, and develop algorithms. In each lesson, they begin with active instruction to introduce or model a concept, team consensus to allow students time to explore the concept together with their teammates, and team mastery, where each student applies the concept as he or she solves problems individually. Each Action Math unit also includes several concept check cycles for ongoing assessment and further practice of concepts, as well as a performance task to provide authentic performance-based assessment at the end of the unit.

Power Math units provide flexibility in MathWings. They address each student's need for remediation, practice, or acceleration. During Power Math units, students relearn previously taught skills, practice current skills, or explore accelerated concepts and skills in units that are tailor-made to fit their particular needs.

There are three main components in the Intermediate MathWings structure: check-in, Action Math or Power Math, and reflection. Daily routines of check-in and reflection frame each Action Math or Power Math lesson. Check-in provides opportunities for homework check, facts and fluency practice, and problem solving. Reflection includes a key concepts summary and logbook entry to bring closure to the lesson. These three components ensure that a balance of problem solving, skill building, and conceptual development is constantly maintained in the MathWings classroom.

Social Studies and Science

Social studies and science are taught in Roots & Wings in an integrated curriculum called WorldLab.

In WorldLab, students learn about the world by experiencing it in simulated form and by investigating important real-world problems and topics in cooperative groups. The world outside the school is a crucial part of the WorldLab program, accessed by means of field studies, telecommunication, computer technology, and involvement of community resource

people. WorldLab units are designed to enhance student motivation and higher-order thinking processes. WorldLab's design promotes an understanding of the interdependence of economic, political, social, physical, and biological systems. This approach to learning represents a significant departure from traditional curricula because it requires integration rather than compartmentalization of information. In WorldLab, students are continually encouraged to ask questions, to collect data, to investigate, and to predict how elements of one system will impact on another system and on their own personal outcomes in the ongoing simulation. Yet students in WorldLab do more than merely study real-world problems; they take an active part in planning and implementing projects that contribute to the community, such as conducting a stream quality survey or participating in efforts to promote the health of a waterway.

WorldLab is a laboratory in which students can utilize and enhance the skills they are learning in other components of the Roots & Wings program, especially reading, writing, and mathematics. Some of the materials included in WorldLab units are designed to be used in the reading and language arts components of Roots & Wings, thereby providing an important context for learning these critical skills. Likewise, mathematics skills required in WorldLab investigations and simulations may sometimes become the subject of lessons in a mathematics class. Physical education, music, and the visual arts are integral components of WorldLab, used to enhance student investigations and participation in simulations.

The BayLab unit for grades 4-5 is illustrative of the key components of the WorldLab model. In the simulation component of BayLab, students become citizens of a fictional place called "Baytown," where they have a simulated family and occupation (such as farmer, builder, waterman, etc.). Baytown is placed near a waterway. While the original Baytown was on the Chesapeake Bay, Baytown has also been located on other waterways, such as the Ohio and Mississippi rivers and the San Francisco Bay, depending on where schools are located. Each student receives an income in their occupation but must pay taxes and bills for food, clothing, utilities, and shelter of their dependents. In addition, students experience various "life events," which are pleasant and not-so-pleasant occurrences such as inheriting a sum of money or needing a washing machine repair. Other events occur that impact on the income students earn in their occupation, such as a decrease or increase in the fish harvest or additional people moving into Baytown. Community resource people, such as watermen and farmers, are asked to share their knowledge with students about occupations in BayLab and factors affecting the bay. Students are engaged in activities that encourage them to think about different viewpoints on environmental issues. They quickly begin to realize that people in different occupations and family situations may have quite dissimilar perspectives about problems facing the bay.

BayLab also engages students in a series of lessons designed to lead to investigations of important problems and topics that affect the bay and how these may impact on their

simulated lives in BayLab. Students try to identify "mystery objects" from a local waterway, survey plant and animal life in the waterways near the school, experience food webs and food chains, and learn about watersheds and the impact of oil spills on aquatic environments. They also carry out experiments to determine the effects of water salinity and dissolved oxygen levels on ecosystem relationships, using a checklist designed to guide them in learning the steps in the scientific process. As BayLab lessons progress, student-generated questions about the bay are continuously posted in the classroom. Using these questions, cooperative teams begin to investigate topics about the bay, such as "What causes the yearly algae bloom in the bay?" or "Why have sea grasses in the bay been disappearing?" Students give presentations describing the outcomes of their research on specific BayLab topics. Students are continuously asked to estimate and predict outcomes as well as analyze and interpret data about the bay. Students also begin a project to enhance local waterways, such as participating in a survey of stream quality in their area, or painting storm drains to warn people that pollutants should not be poured into storm drains.

Students are informed that they will next have an opportunity to run for election in a simulated State Legislature so that they can sponsor bills to help the bay. In writing campaign speeches, students are asked to use the information they have learned about the bay to propose what bills they will introduce if elected. Students learn how to register to vote in the upcoming BayLab election and conduct extensive campaigns. Issues that arise in campaigns may require students to do additional research about particular bay topics. Once the election has been held and the results announced, the class helps the elected delegates and state senators write bills to help enhance bay life. Again, students use the information learned about the bay in writing and revising these bills. Bills that are recommended by the classroom delegates and state senators are introduced at the culminating activity of the BayLab unit — a meeting of the BayLab Model State Legislature. Students from different classes (sometimes different schools) and their elected representatives come together to deliberate about bills to preserve and enhance the bay. In committee meetings and on the floor of the House of Delegates and State Senate, students have an opportunity to bring to bear the knowledge they have learned in debating and revising submitted bills. A local notable may act as Governor and will sign or veto the bills passed by the model legislature. Once the legislature session is completed, taxes are assessed for any programs that require new revenues (with accompanying groans from the taxpayers).

Other WorldLab units include:

- ***From Rebellion to Union*** (grades 4-5) deals with the American Revolution. Students in this simulation take on the roles of patriots or loyalists with families and occupations of the period from 1763-1791 (including African Americans and

Native Americans). They begin by being incited into a classroom mini-revolt over the issue of being taxed to pay for the WorldLab program. They then write their own classroom Declaration of Independence and Constitution. Students compare and contrast their own revolt with the revolt of the American patriots. Subsequently they act as a more broad-based Continental Congress and Constitutional Convention (including both African Americans and Native Americans) in deciding on the contents of a U.S. Declaration of Independence and Constitution. Science is incorporated through the need to understand and combat common diseases such as smallpox, which had such a devastating impact on revolutionary armies. Students create a slide-tape show or videotape with appropriate music of the time and art work to depict key events in the Revolutionary War and writing of the Constitution.

- ***Encounters*** (grades 4-5) is a unit that helps students understand how the interactions among three major cultural groups — African, European, and Native-American — shaped the development of our nation. Instead of merely memorizing a litany of facts about the origins of our nation, students become historians and scientists in-training. They explore the methods historians use by studying a local historic site. They become scientists as they investigate how scientific discoveries impacted on early American societies. Students recreate Ben Franklin's Traveling Electrical Show using Franklin's original experiments in static electricity. The unit includes authentic experiments to replicate and primary historical documents to investigate. Later in the unit, teams experiment with methods for growing crops typically grown during Colonial times. They collect data to help them decide how to produce the most bountiful harvest for their family. Ultimately teams harvest and enjoy their crops. Students develop their roles as Africans, Europeans, or Native Americans during specific historical periods by composing "Day in the Life" stories about a typical day in the life of the character they are role-playing. Students use WorldLab computer software to research and publish their Day in the Life stories and assemble them into class books. At the conclusion of the unit, students plan and present an Encounters Fair to share their learning and insights with the local community.

- ***Body Networks*** (grades 4-5) is an investigation of the nervous system that focuses on the role of the brain in controlling body functions. Students take the roles of consultants who develop public health announcements focused on safety procedures that prevent head injury and protect the brain. For example, students design, build, and test bicycle helmets and then produce commercials to persuade children to use them.

- ***Inventors*** (grades 4-5) consists of four components: 1) reviewing inventions that have made an impact on modern society; 2) learning about the creative process and entrepreneurship by reading biographies of famous inventors; 3) engaging students in identifying a need for a product, designing a product to meet this need, and creating a campaign to sell the product; and 4) using the "World in Motion" program developed by the Society of Automotive Engineers to assist students in

taking on the roles of an engineering design team as they experiment with the laws of motion and apply what they have learned to create the speediest vehicle in their class.

- ***Adventures*** and ***Africa*** (grade 3) are units designed to be taught consecutively. They focus on geography, economics, and physical and earth sciences. *Adventures* prepares students for worldwide explorations by exploring their own school community first. As students prepare a visitor's center and guide to their school, they apply newly mastered map making and research skills. They identify elements common to all communities. Next, students conduct experiments about buoyancy and navigation as they prepare to simulate a ship's crew on a voyage of discovery. They apply their findings as they make critical design decisions and build a clay ship that carries cargo and floats. They learn about the economic concepts of scarcity, opportunity cost, and supply and demand as they choose what to bring along on their expeditions. Finally, they set sail for *Africa*, using the stars to plot their course. When they arrive, a simulation of life in an African community begins. They investigate the same aspects of community they identified earlier in their school. They compare and contrast government, communication, infrastructure, use of natural resources, foods, customs, and traditions, among other factors. Students find that communities exist to satisfy peoples' wants and needs. Students also discover a problem in this community. There has been a drought and water is scarce. Students work in teams to design a new irrigation system and apply water conservation methods to solve the problem. Students pack their bags and set sail for their next destination, Japan.

- ***Trees*** (grades 1-2) involves students in a study of the life cycle of trees throughout the year. Students become botanists as they identify what they already know about trees, and decide what they need to find out. The unit offers them a variety of opportunities to explore and investigate their questions with activities such as adopting a tree, observing it throughout the school year and writing about it in a journal, planting seeds and observing their growth, conducting experiments, and recording their findings in lab reports. Students "branch out" and investigate the role trees play in other parts of the world, such as South American rain forests. They build thinking, reading, and writing skills as they discover that trees play an important role in providing food, shelter, recreation, and employment. The unit culminates with dramatic performances designed to entertain as well as educate.

- ***Harvests*** (grades 1-2) lets students take a trip in search of harvest celebrations around the world. In this multi-cultural, multi-disciplinary unit, students compare and contrast different customs, traditions, and farming methods all related to the foods people eat in many diverse lands. The unit increases cultural awareness, respect for diversity, and an understanding of what we all have in common. Students receive passports, prepare itineraries, and take on the role of the internationaal traveler in order to complete their investigation. The unit culminates with an international celebration of the harvest featuring student projects, cooking, and creative dramatics.

Family Support and Integrated Services

The Family Support and Integrated Services component is designed to achieve three goals in Roots & Wings: 1) to ensure success for every child, 2) to empower parents through partnership, and 3) to integrate health, social, and educational services to children and families. Each school has a Family Support Team, a site-based team of school personnel who are concerned with four areas: attendance, school-based intervention, parent involvement, and creating and maintaining effective connections with community service providers. In addition, there is a network of community service providers who provide a broad range of necessary services for children and families.

Roots & Wings schools adapt community services and supports to their local needs and resources. Examples of these are as follows:

Attendance. Family Support Teams in Roots & Wings schools monitor attendance, create attendance incentive programs, and make home visits along with district pupil personnel workers for children with chronic attendance and tardiness problems.

School Based Intervention. Many Roots & Wings schools have a full-time family support coordinator, who manages the family support team meetings and helps ensure that agendas are developed, notification of meetings is timely, case managers are assigned, parents are invited, and follow-ups are scheduled. School staff receive a series of workshops on Family Support and are aware of the procedures for referral.

In addition to early intervention, the Family Support Team plans and develops classroom-based prevention efforts. Social skills lessons, in a program called Getting Along Together, are used to augment the development of cooperative teams in the classroom. These units include basic listening skills lessons, empathy skills, and team-building skills. Novels and books that highlight these areas are available for the reading segment so that social skills are woven into the curriculum and school day. All schools review discipline procedures in order to ensure that children use a social problem-solving model. Class councils are often set up to enable classes to brainstorm solutions to ongoing student- and teacher-identified problems. In addition, parenting skills classes and in-services for parents are often made available so parents can help encourage their children to use the same problem-solving strategies at home that they use in school.

Family Support Teams have also developed school buddy programs, peer tutoring programs, and volunteer listener projects to ensure that the school offers a wider variety of support mechanisms for students who may need them. Teams continue to assess the specific needs of their sites and develop projects accordingly.

Parent Involvement. Broadening parent involvement is a main focus for Family Support. The family support coordinator takes responsibility for implementation of a wide range of parent involvement projects. For example, schools may develop a Welcome Wagon for new families. Parents have been recruited to be volunteer listeners at school and participate in a wide range of activities. Schools have planned a wide array of parent activities designed to help parents understand and support the new school curriculum at home. One example of this is a program called Raising Readers, in which parents learn how to support literacy in the home setting.

Service Integration. A major focus of Roots & Wings is to integrate community services into schools. The goal is not only to provide better access and linkage but also to coordinate service delivery. Each school has specific connections to local health, social service, and mental health agencies, depending on local resources, interests, and needs.

After School Programming

Roots & Wings schools may organize after-school programs. The initial goals of the after-school program are primarily academic. For example, schools may have enrichment tutoring and a homework club. Certified teachers, paraprofessionals, parents, volunteers, or cross-age peers may serve as tutors. In addition, there may be a range of recreational, cultural, and arts activities at each site.

Site-Based Management

Each Roots & Wings school has a School Improvement Team which consists of the principal, facilitator, and representatives of teachers and parents. It meets frequently to plan the Roots & Wings program and then continues to meet after implementation begins to set policies about how the program should be adapted to the needs of the school.

Facilitators

From our experience with Success for All, we have learned that for a school to effectively implement a complex and closely coordinated set of changes in all aspects of school organization, curriculum, instruction, special services, family support, and other elements, there must be a highly qualified individual whose only responsibility is to help make certain that all programs are well implemented and that all staff members are working cooperatively to achieve the same broadly shared vision of what the school should be.

Each Roots & Wings school has a full-time facilitator, whose job is to help the school's staff implement all of the changes needed to make the program successful. The facilitator has many responsibilities. One is to visit teachers' classes as a non-evaluative coach to help teachers implement the Roots & Wings curricula. Facilitators give teachers feedback on what they are doing, may teach demonstration lessons, or may cover classes to allow teachers to observe each others' classes. They organize meetings of teachers working at the same instructional levels to provide opportunities for the teachers to help each other solve problems. Facilitators conduct workshops on elements of the program, on class management, on family support, and other topics, and coordinate continuing training sessions on these and other topics provided by Success for All Foundation staff. Facilitators manage the eight-week assessment program, including student placements. They use assessment information and teacher recommendations to identify students in need of adult or peer tutoring, family support services, or other services, and monitor the provision of these services to make sure they are actually making a difference. Facilitators organize meetings among teachers, tutors, family support staff, and others to make sure that services to students are coordinated and that there is open and frequent communication among different staff members working with the same students. In short, the facilitator's role is to make certain that no child "falls between the cracks," that every child is moving as rapidly as possible toward attainment of world-class standards, and that resources are used as effectively and efficiently as possible.

Special Education

Roots & Wings incorporates an approach to special and remedial education called "neverstreaming" (Slavin, 1996). This means that special education resources should be directed toward prevention, especially for children ages birth to five, and early intervention. These programs are closely coordinated with the Roots & Wings early childhood program, described earlier.

For most students at risk of being categorized as learning disabled or mildly to moderately mentally retarded, early intervention takes the form of one-to-one tutoring in reading at ages 6 or 7, but students may also receive family support services, social skills training, behavioral interventions, speech or language assistance, or other services closely integrated with their progress in the regular school program. Special education teachers and resources are used to provide these preventative and early intervention services to all at-risk students, whether or not they have IEPs.

Otherwise, nearly all children who would ordinarily be in special education are instead maintained in the regular classroom programs and served flexibly by any of these supplemen-

tary services. This model meets the needs of most at-risk students. However, for those students who still require special education and related services, their IEP will clearly specify special services which enable them to participate as fully as possible in the regular classrooms and the mechanism by which students will be dismissed from special education when they no longer need it.

Of course, the "neverstreaming" concept applies most directly to young students who have not yet been identified for special education. Students who already have IEPs are mainstreamed to the maximum extent possible and served flexibly with close coordination with the classroom program, but most such students continue to receive special education services based on individual need.

Program Evaluations

The main evaluations of the full Roots & Wings model took place in the original pilot site for the program, in St. Mary's County, Maryland, and in the first school to implement Roots & Wings outside of Maryland, in San Antonio, Texas.

St. Mary's County

St. Mary's County Public Schools is a rural school district at the extreme southern tip of Maryland west of the Chesapeake Bay. Farming and fishing have been the traditional economic base of the county, but it is also the home of the Patuxent Naval Air Warfare Center and other military facilities.

The pilot of the Roots & Wings design took place in the three most impoverished elementary schools in the district, in and around the town of Lexington Park, as well as a less impoverished small rural school south of the town. Across the four schools, 48.6% of students qualified for free- or reduced-price lunches, ranging from 36.1% at the rural school to 59.9% at one of the Lexington Park schools (in comparison, 30.9% of all Maryland students and 23.9% of St. Mary's County students qualify for free lunches). Approximately half of the students in the pilot schools are African American, and almost all of the remainder are white. Mobility rates in the pilot schools, at 25% per year, are almost double the rate for the state (12.7%) or for St. Mary's County (14.7%). The three Lexington Park schools are Title I schoolwide projects, but the rural school does not receive Title I funds.

Because the pilot schools served considerably more impoverished student populations than other St. Mary's County schools, the evaluation of student achievement outcomes focused on gains over time on the state accountability measure, the Maryland School Performance Assessment Program (MSPAP), given in grades 3 and 5. These gains were compared to means for the entire state at those grade levels, to correct for overall trends due to variations in test difficulty, increasing familiarity with test formats, increasing curriculum alignment with test content, and other statewide factors likely to influence test scores.

The sole outcome measure studied was scores on the MSPAP. This is a state-of-the-art performance measure used since 1993 as Maryland's assessment for school accountability. MSPAP uses a matrix sampling scheme, meaning that different students in a given grade level would take different subtests in each area, to enable assessment of a very broad domain of skills and knowledge across the school. Students are asked to respond to extensive literature selections, to write in various genres, to solve complex math problems, and to set up and carry out science experiments, with open-ended responses scored by expert raters against scoring rubrics. Six scales are reported: Reading, Writing, Language, Mathematics, Science, and Social Studies.

Because of the use of matrix sampling, individual scores were not available for use in statistical comparisons. Instead, school-level means (the percent of students scoring at satisfactory or better on each scale) are reported for each school. In this report, graphs comparing MSPAP scores for successive cohorts of students in the four pilot schools to those for the state as a whole show the effects of the program. The number of pilot schools is too small to permit school-level tests of significance, but individual-level analyses (with about 300 children tested at each grade level) would show statistical significance for differences of one to two percentage points. The design is a replicated single-subject design using the four experimental schools as subjects and showing changes over time as the program elements were introduced.

The meaning of the test score trends shown in the graphs for each MSPAP grade level and subject depends on the sequence of events in which program elements were implemented and other changes took place. This sequence was as follows:

1993-94	Implementation of Success for All elements (pre-K, reading, tutoring, language arts).
1994-95	Implementation of WorldLab, pilot of MathWings, grades 3-5.
1995-96	Full implementation of all curricular components.
1996-97	NASDC funding substantially reduced; superintendent leaves; connection with Johns Hopkins reduced; implementation drops off.
1997-98	Implementation spotty; connection with Johns Hopkins minimal.

The implementation of Roots & Wings in St. Mary's County was funded at relatively high levels during 1993-1996. After that, NASDC expected districts to pick up almost all implementation costs, providing small funding to districts for piloting. In St. Mary's County, this drop in funding had a strong negative impact on the quality of program implementation. Reductions in time for building facilitators, in tutoring, in after-school programs, and other elements were direct consequences. The resignation of Dr. Joan Kozlovsky, the superintendent who had been instrumental in bringing Roots & Wings into St. Mary's County, further contributed to a decline in district (and therefore school-level) support for implementation. As a result of these changes, program implementation became a teacher-by-teacher option, with good implementations, poor implementations, and non-implementations of different program elements existing side by side. Involvement of Johns Hopkins trainers diminished sharply after the 1995-96 school year, as the schools decided to pick and choose the program elements they wanted to continue, modify, or drop.

The pattern of implementation was distressing from the standpoint of the establishment of strong demonstration sites but it also provided an opportunity to assess school performance levels before, during, and after the program was implemented in full force.

Figures 1-12 summarize MSPAP scores across the four pilot schools, in comparison to the state of Maryland as a whole. The Spring 1993 scores represent a pretest; unfortunately, the state did not release third grade reading scores in that year because of technical flaws in the assessment. The 1994 scores show only the effect of the first year of the reading program. The 1995 and 1996 scores reflect the increasingly complete implementations of all program elements, and cumulative impacts on students who are likely to have experienced program elements for multiple years. Scores from 1997 and 1998 reflect maintenance of student skills, as program implementation was spotty and declining during those years.

The results are somewhat different for the different scales and grade levels, but there is a clear pattern across all of them. The Roots & Wings pilot schools scored substantially below the state means in 1993 and 1994, before most of the program was implemented. Scores increased dramatically in 1995 and 1996, as full implementation was achieved. During those years, scores for the Roots & Wings schools were above or only slightly below the state averages in both third and fifth grades; in 1996, the peak implementation year, third grade scores were above state averages in reading and math, and fifth grade scores were above state averages on every scale.

Figure 1
Maryland School Performance Assessment Program:
Percent Scoring at Satisfactory or Better
St. Mary's County Roots & Wings Schools and State Means
Reading, Grade 3, 1993-98

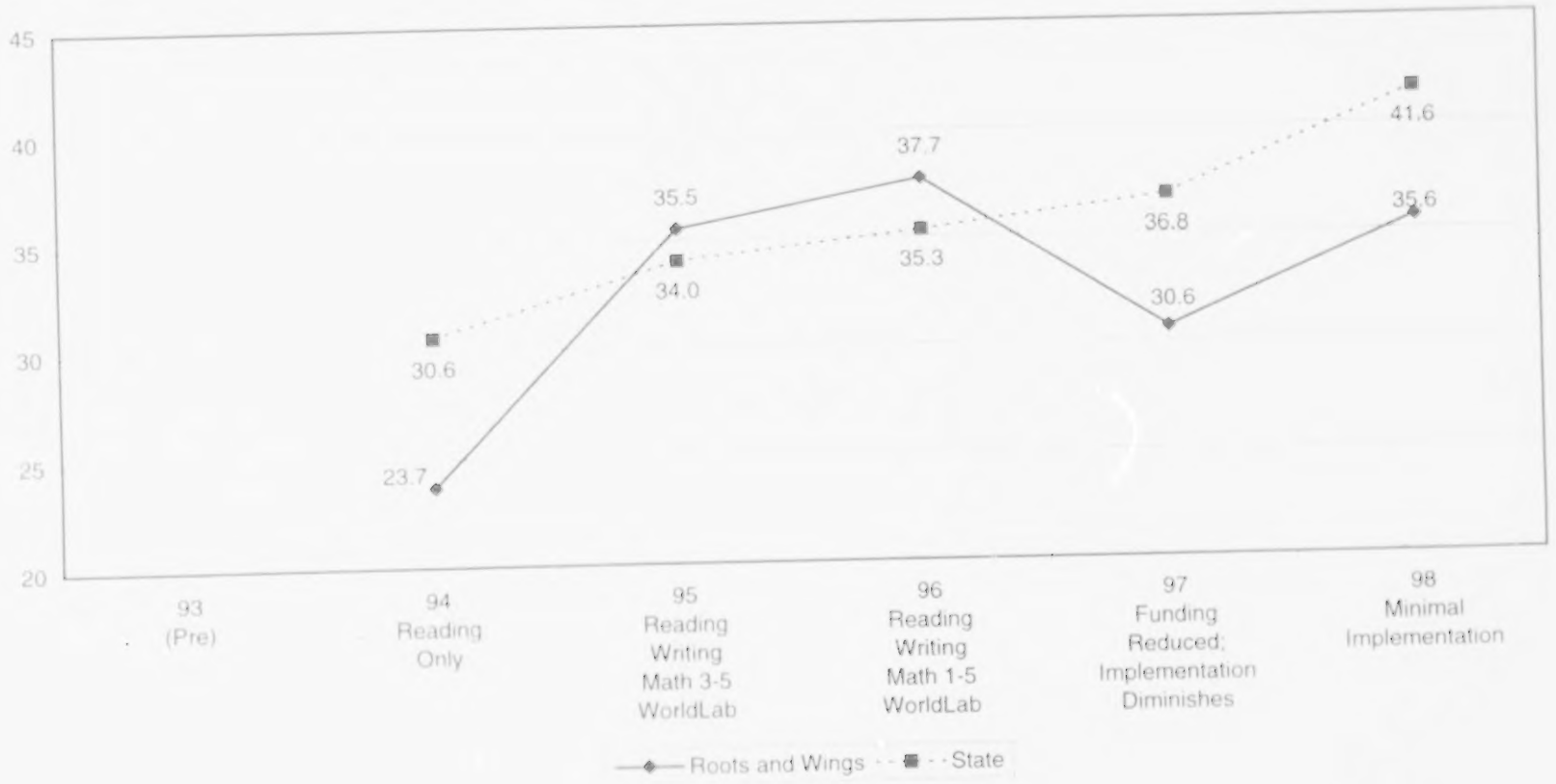


Figure 2
Maryland School Performance Assessment Program:
Percent Scoring at Satisfactory or Better
St. Mary's County Roots & Wings Schools and State Means
Writing, Grade 3, 1993-98

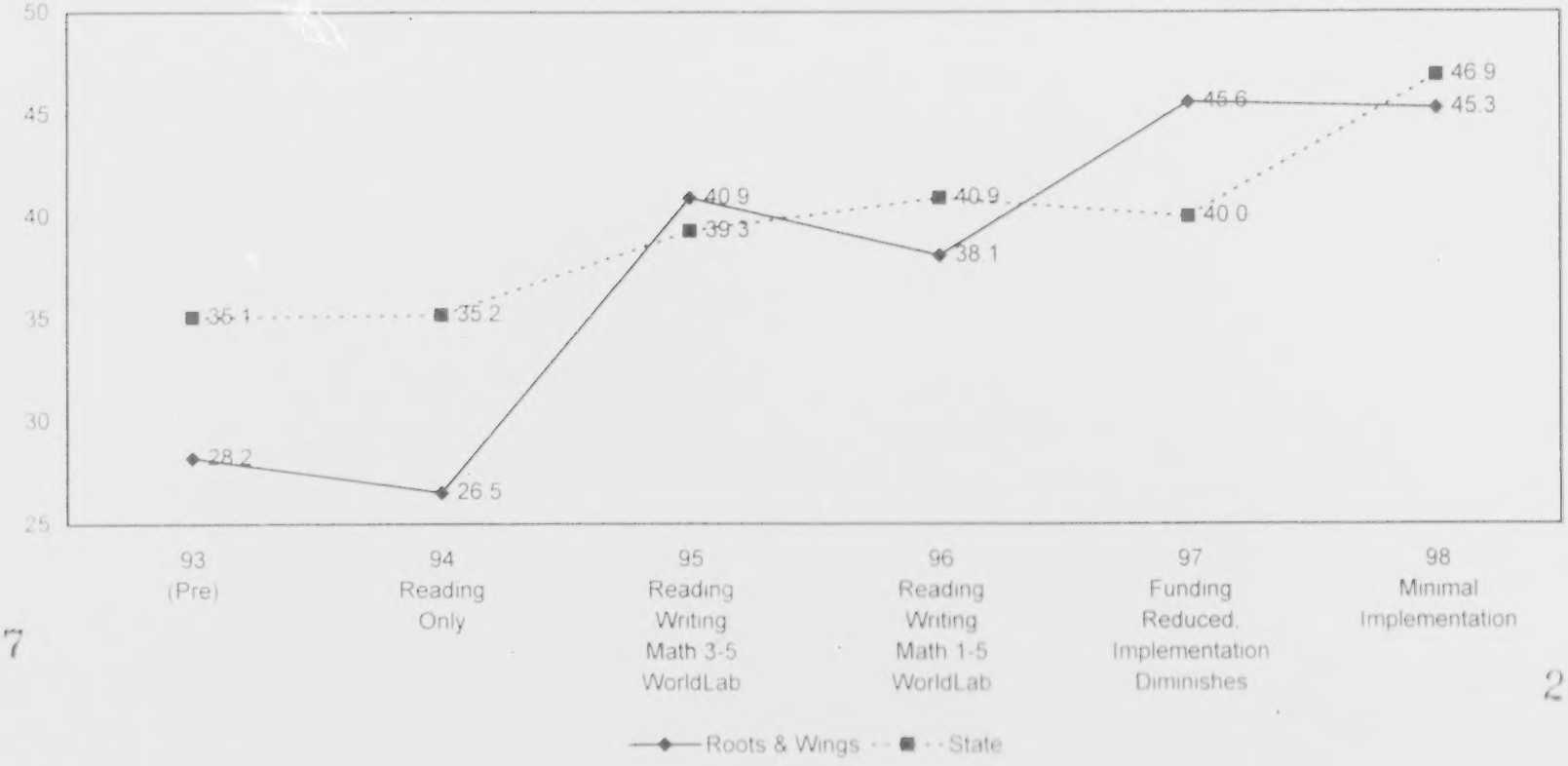


Figure 3
Maryland School Performance Assessment Program:
Percent Scoring at Satisfactory or Better
St. Mary's County Roots & Wings Schools and State Means
Language, Grade 3, 1993-98

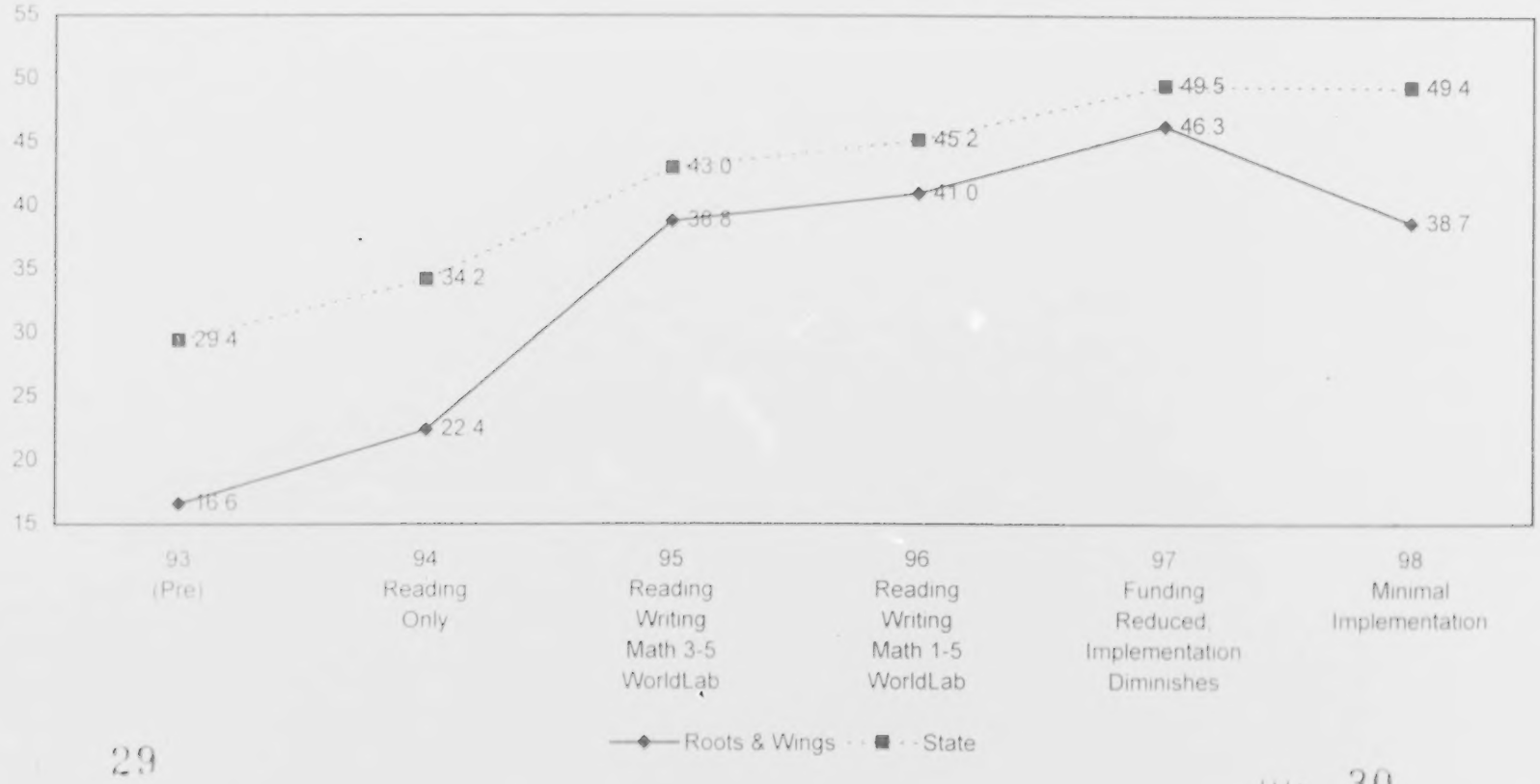


Figure 4
Maryland School Performance Assessment Program:
Percent Scoring at Satisfactory or Better
St. Mary's County Roots & Wings Schools and State Means
Math, Grade 3, 1993-98

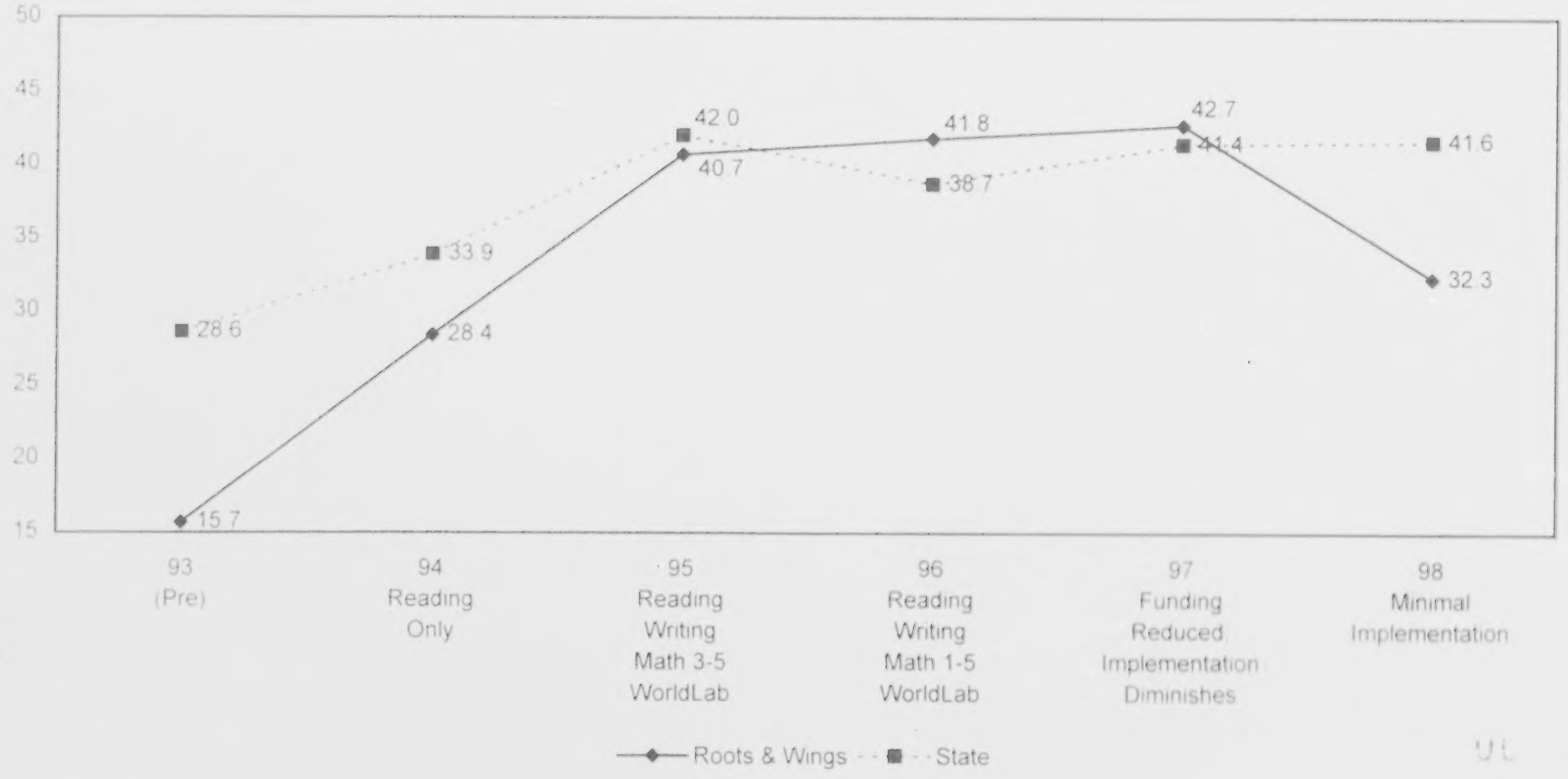


Figure 5
Maryland School Performance Assessment Program:
Percent Scoring at Satisfactory or Better
St. Mary's County Roots & Wings Schools and State Means
Science, Grade 3, 1993-98

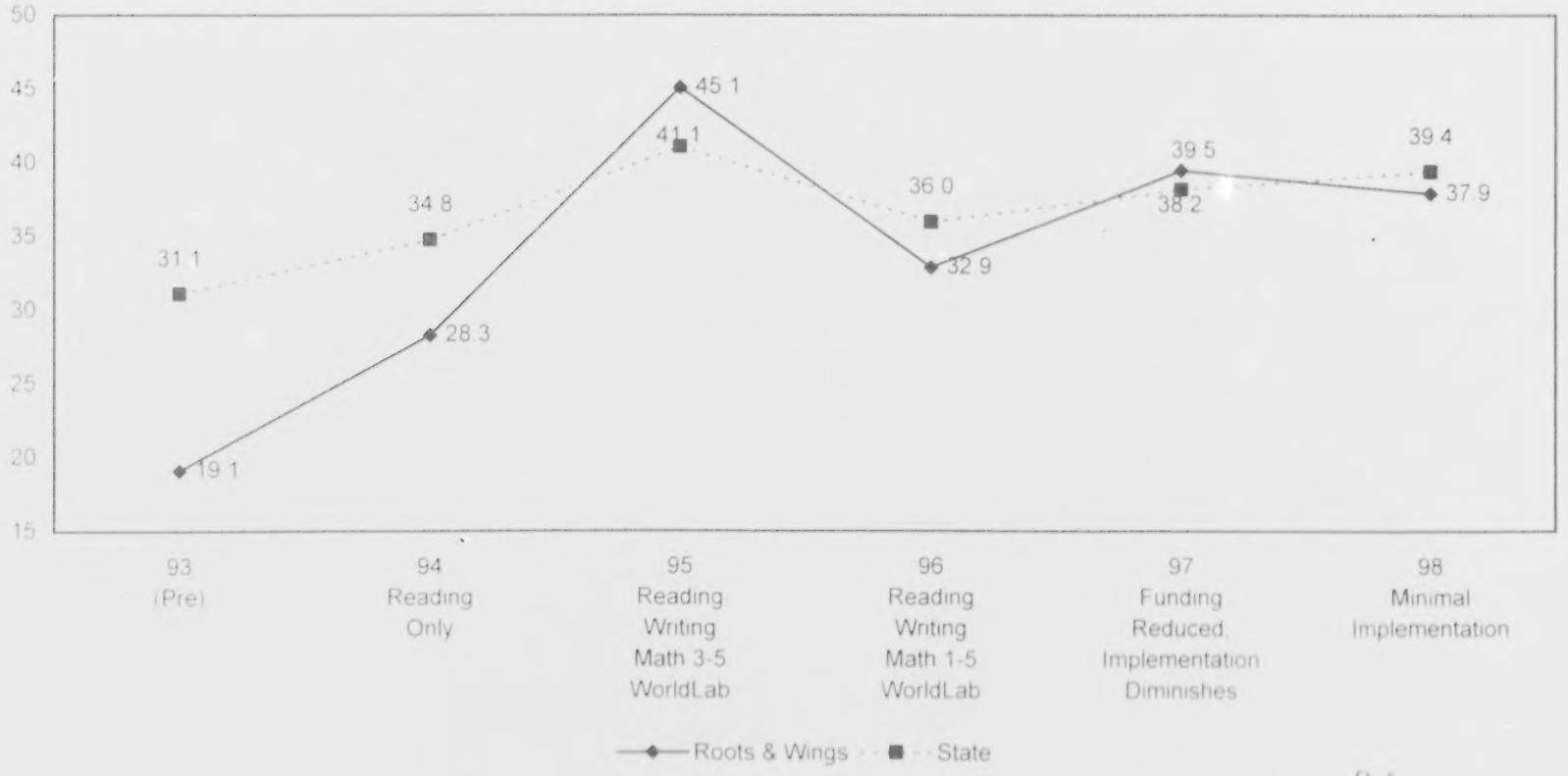


Figure 6
Maryland School Performance Assessment Program:
Percent Scoring at Satisfactory or Better
St. Mary's County Roots & Wings Schools and State Means
Social Studies, Grade 3, 1993-98

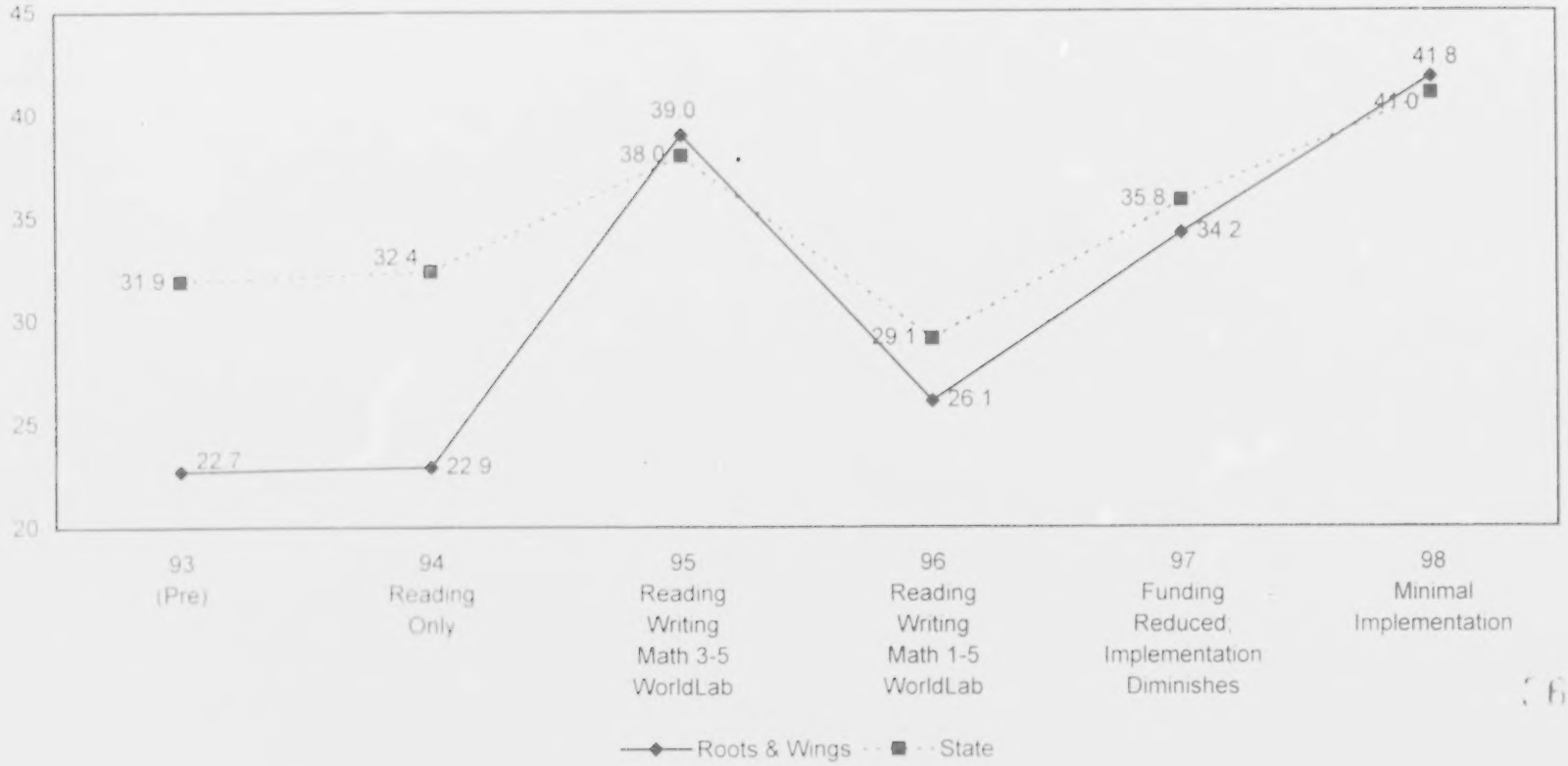


Figure 7
Maryland School Performance Assessment Program:
Percent Scoring at Satisfactory or Better
St. Mary's County Roots & Wings Schools and State Means
Reading, Grade 5, 1993-98

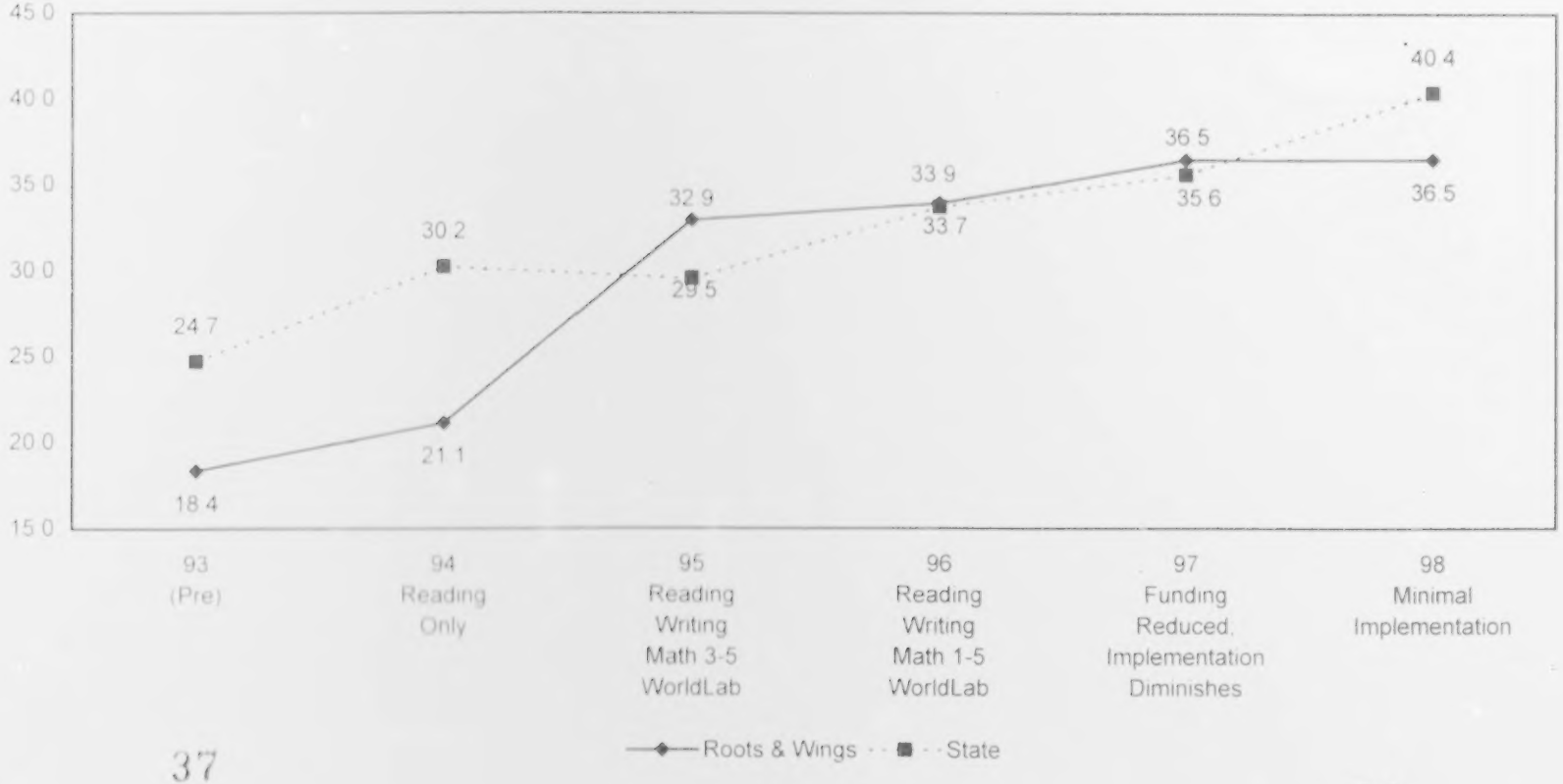


Figure 8
Maryland School Performance Assessment Program:
Percent Scoring at Satisfactory or Better
St. Mary's County Roots & Wings Schools and State Means
Writing, Grade 5, 1993-98

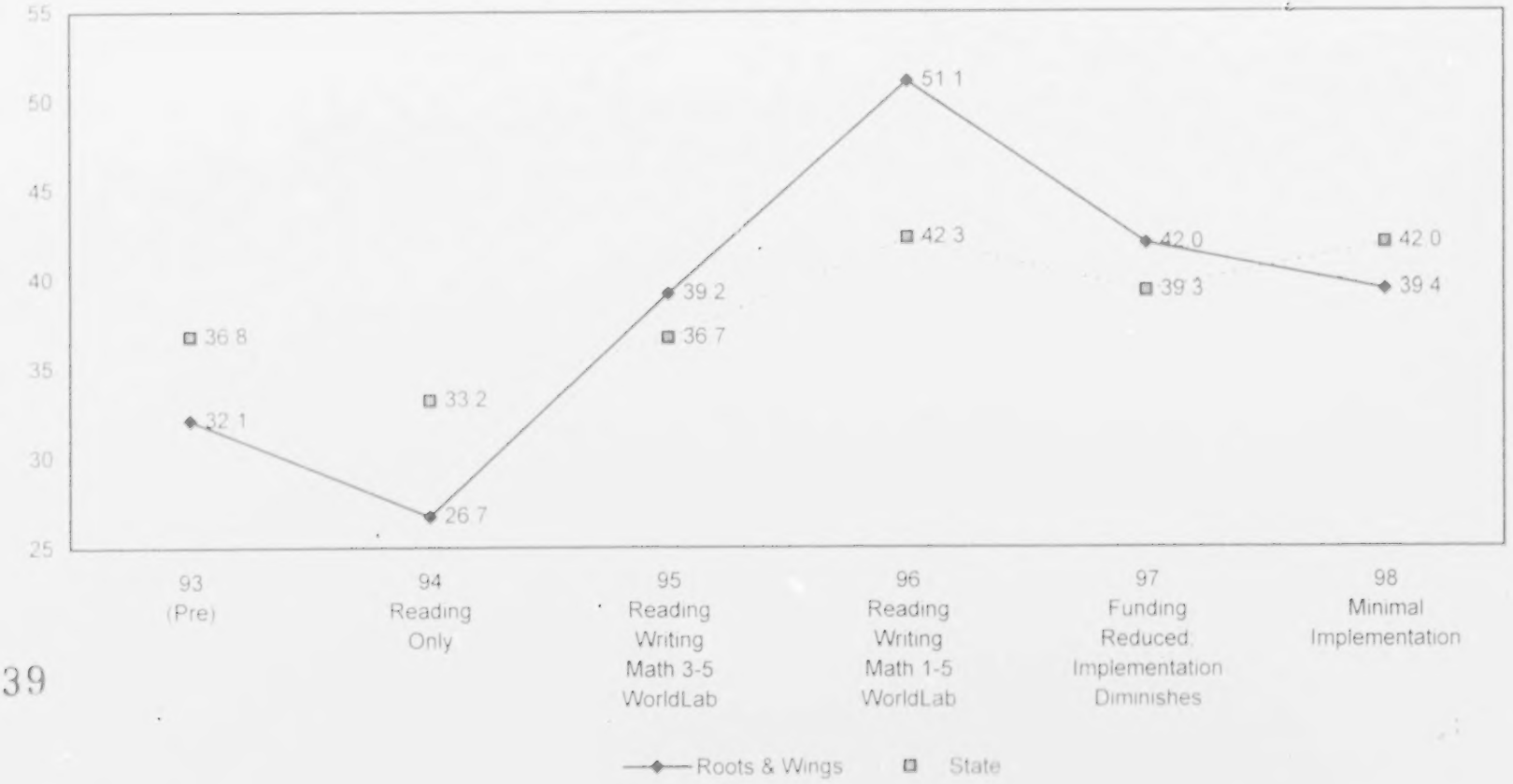


Figure 9
Maryland School Performance Assessment Program:
Percent Scoring at Satisfactory or Better
St. Mary's County Roots & Wings and State Means
Language, Grade 5, 1993-98

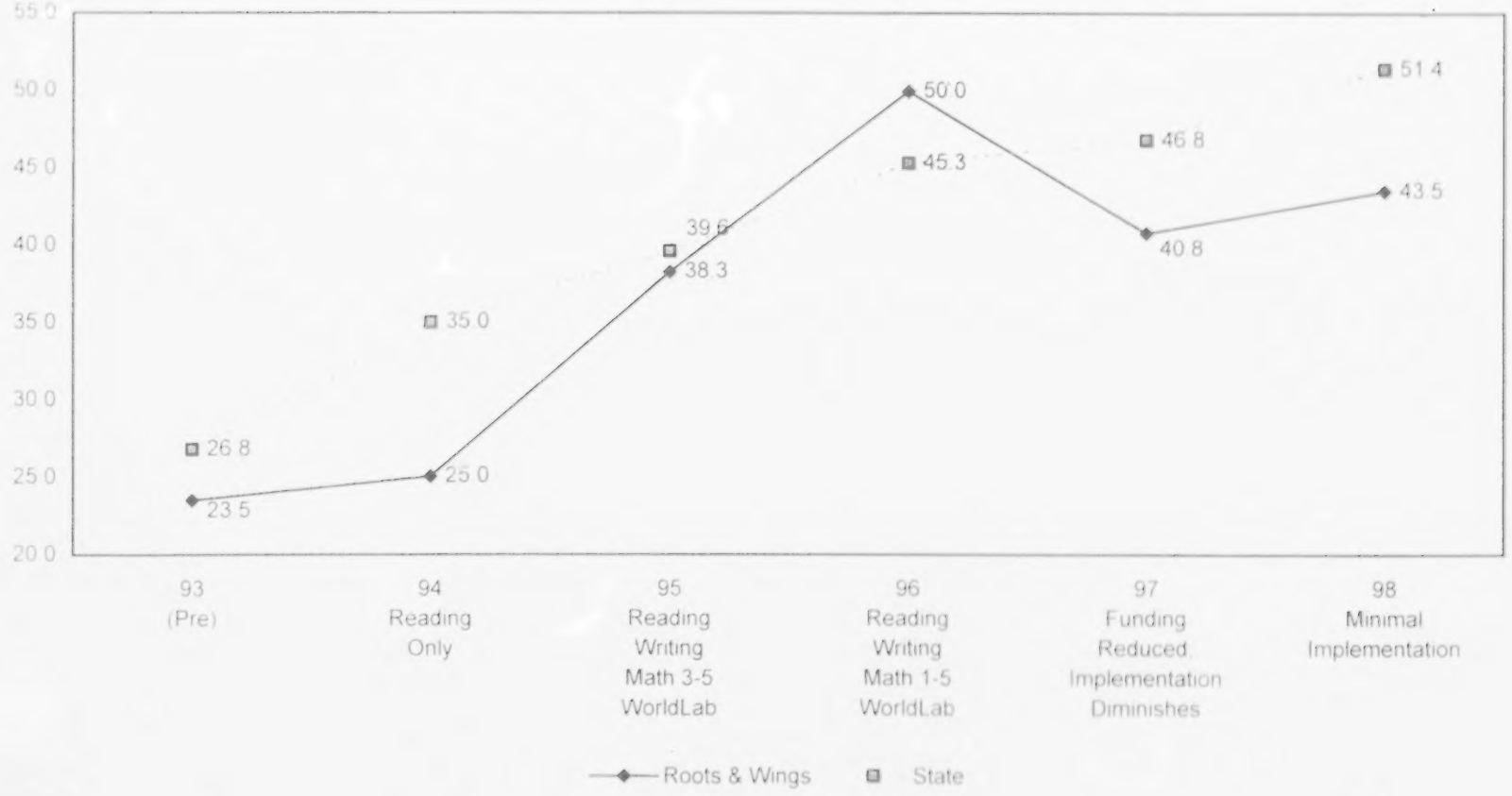


Figure 10
Maryland School Performance Assessment Program:
Percent Scoring at Satisfactory or Better
St. Mary's County Roots & Wings Schools and State Means
Math, Grade 5, 1993-98

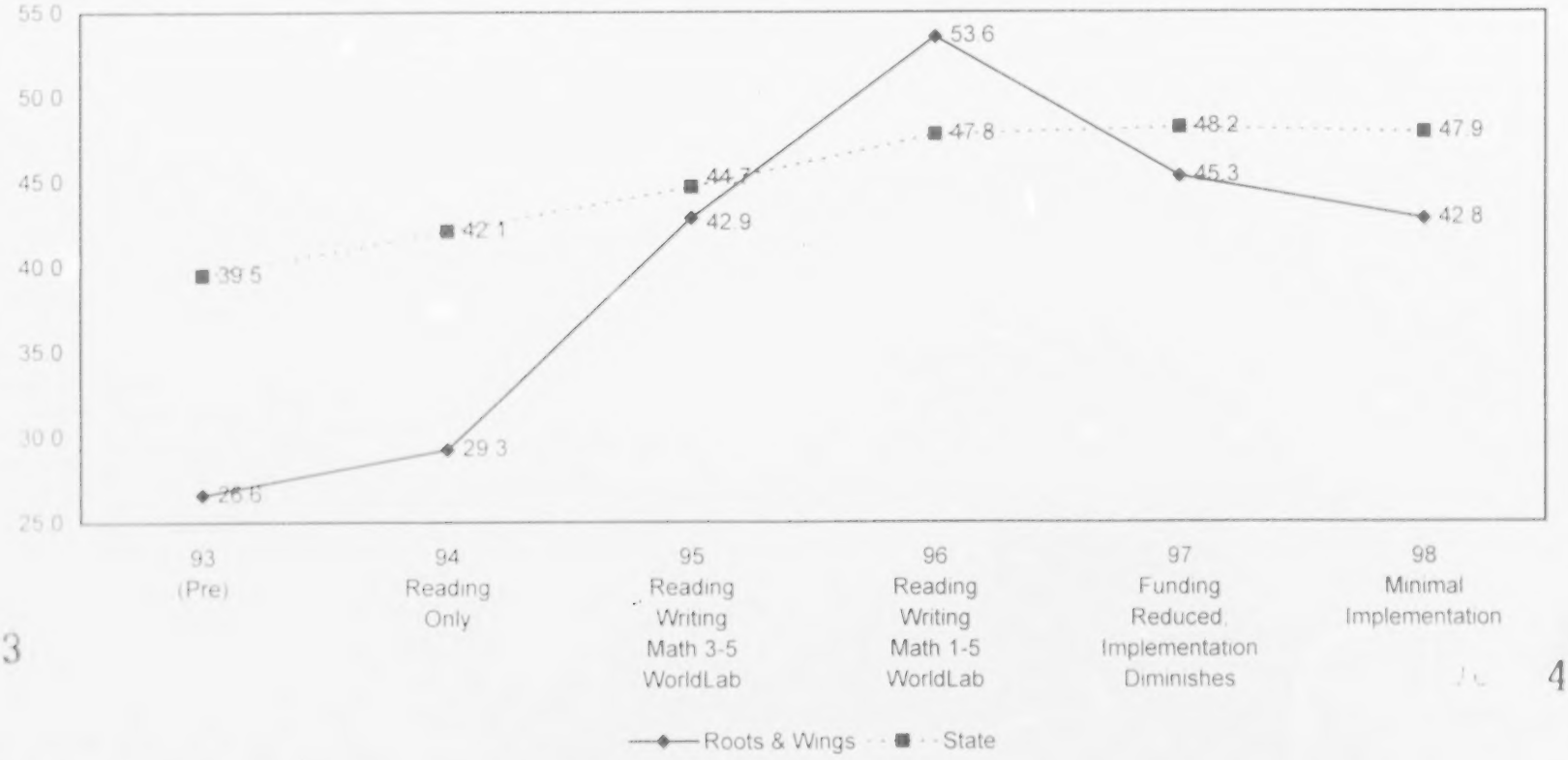


Figure 11
Maryland School Performance Assessment Program:
Percent Scoring at Satisfactory or Better
St. Mary's County Roots & Wings and State Means
Science, Grade 5, 1993-98

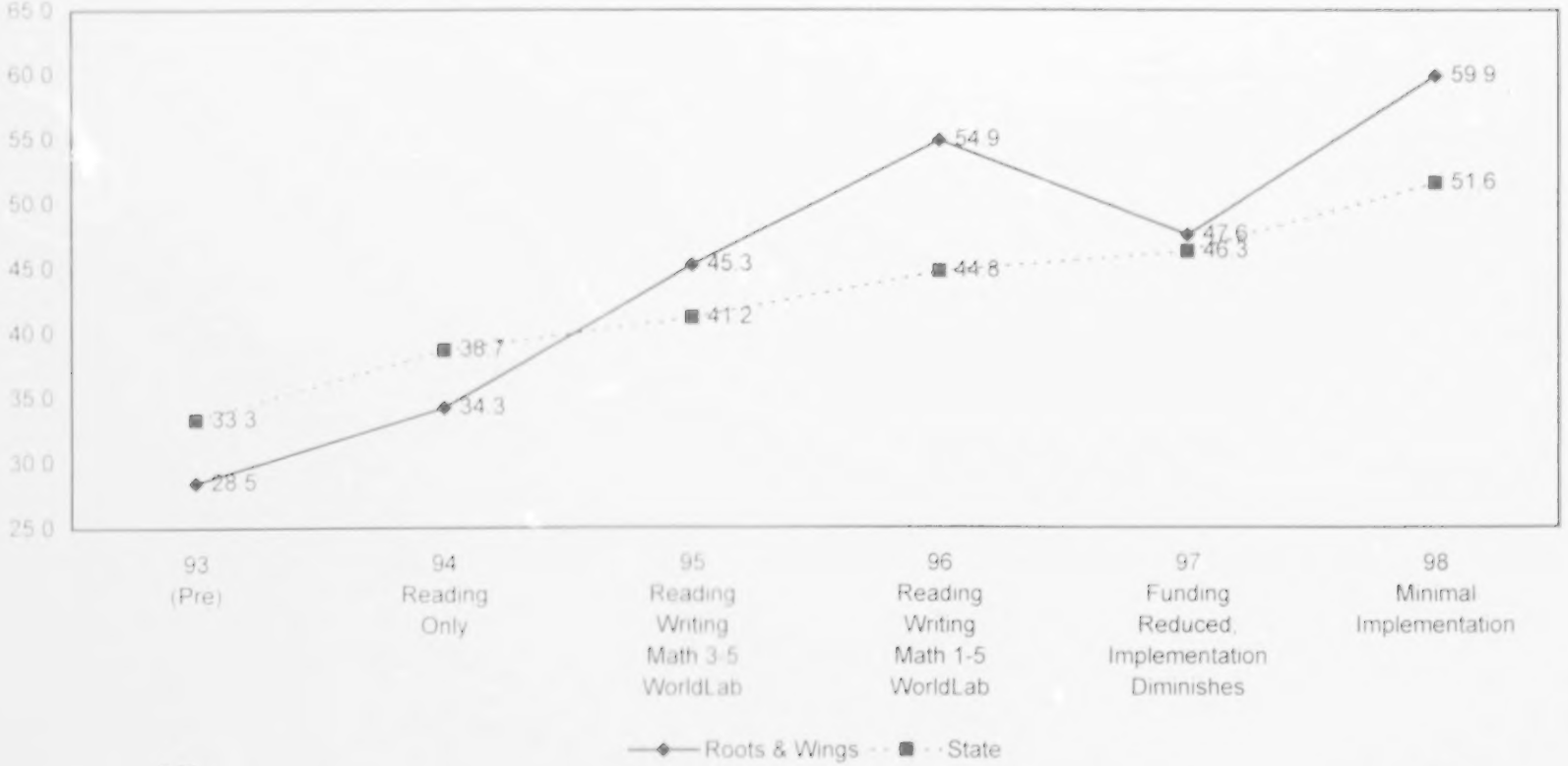
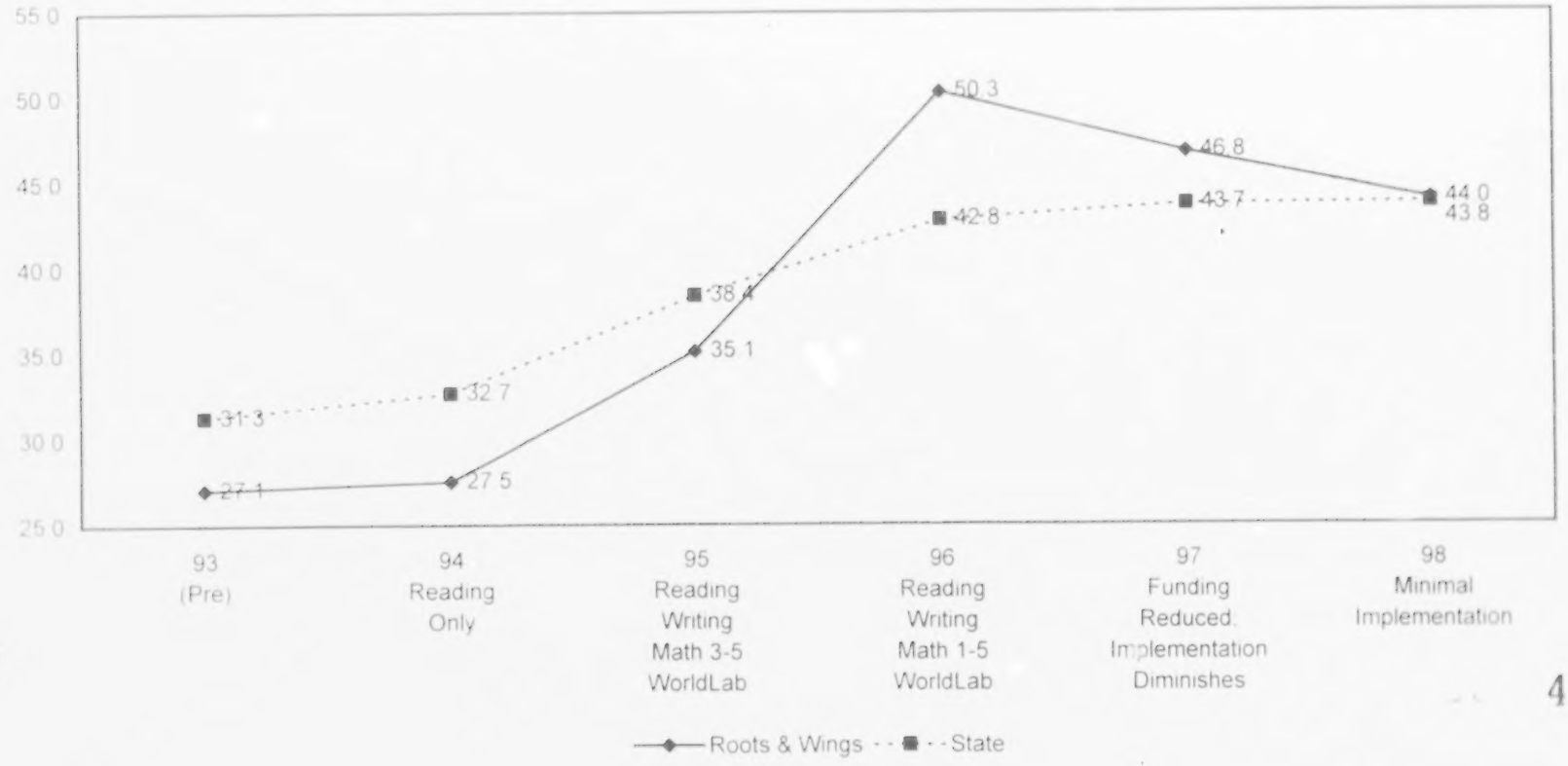


Figure 12
Maryland School Performance Assessment Program:
Percent Scoring at Satisfactory or Better
St. Mary's County Roots & Wings and State Means
Social Studies, Grade 5, 1993-98



Figures 13 and 14 show substantially greater gains made by Roots & Wings schools than those made by other Maryland students on all measures.

In 1997 and 1998, however, MSPAP scores generally failed to increase much further. In absolute terms, scores did increase in third grade writing, science, and social studies, and in fifth grade reading and science, but declined in third grade math and fifth grade writing, language, math and social studies. Because of rising state scores, the scores of Roots & Wings schools had slipped back below the state mean on every scale except third grade social studies and fifth grade science and social studies. Still, 1998 scores were higher than 1993 and 1994 scores in absolute terms on every measure and showed greater gains than the state on every measure except fifth grade language (see Figures 15 and 16), indicating that the students in these schools were still performing better after the program was substantially discontinued than they had before it began.

San Antonio, Texas

The first school to implement all elements of Roots & Wings outside of Maryland is Lackland City Elementary School, in the Northside Independent School District of San Antonio. Lackland City serves a very impoverished population. Overall, 92.7% of Lackland City's students are economically disadvantaged, a proportion that has risen somewhat from 88.2% in 1994. Its students are 79.2% Hispanic, 15.7% white, and 4.9% African American.

Lackland City first adopted Success for All in 1994-1995. It then added MathWings for grades 3-5 in 1995-1996, and WorldLab and MathWings for the primary grades in 1997-1998. Throughout this period, the school has had the same principal and has been able to maintain good implementation quality.

Like Maryland, Texas has a high-stakes accountability measure that is taken very seriously by the schools and districts. Scores on this measure, the Texas Assessment of Academic Skills, or TAAS, were used in comparison to the state as a whole to assess the impact of Roots & Wings. The TAAS is given every year, grades 3-5, in reading and math, and in fourth grade in writing. Scores are the percentages of students scoring above minimum standards.

Figures 17-20 show the results. The 1994 scores are a baseline, before implementation began. In all three areas assessed, Lackland City students have shown substantial gains, starting far below state means in 1994 and increasing to near state means in reading and math and slightly above state means in writing. The gains made at Lackland City compared to those for the state as a whole are summarized in Figure 20, which shows gains in percentages of students meeting minimum standards that were substantially greater than those made in the state in all three areas.

Figure 13
Maryland School Performance Assessment Protocol
Gains in Percent Scoring Satisfactory or Better
St. Mary's County Roots & Wings Schools vs. State Means
Grade 3, 1993-1996 (full implementation)

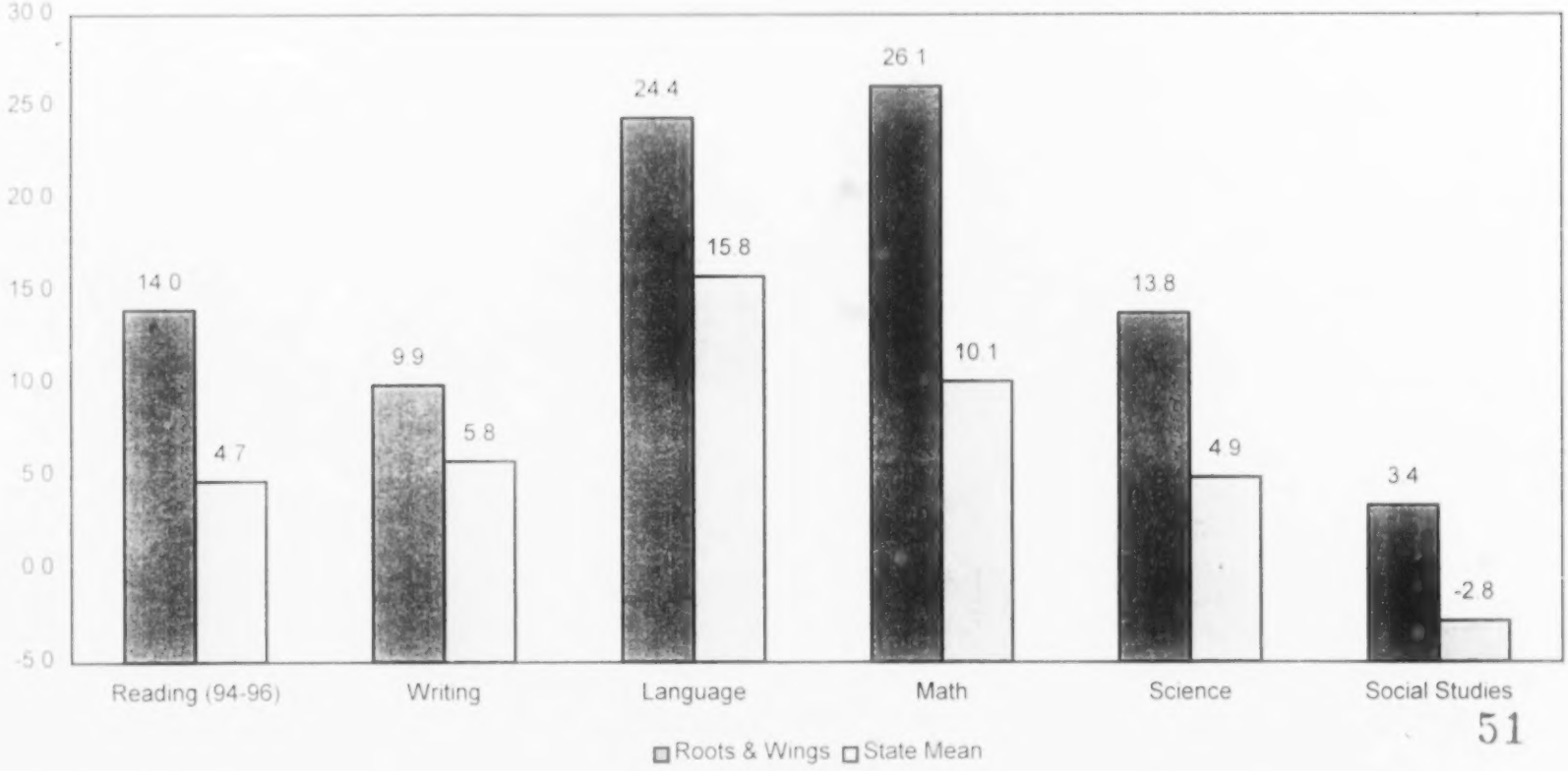


Figure 14
Maryland School Performance Assessment Program
Gains in Percent Scoring Satisfactory or Better
St. Mary's County Roots & Wings Schools vs. State Means
Grade 5, 1993-1996 (Full Implementation)

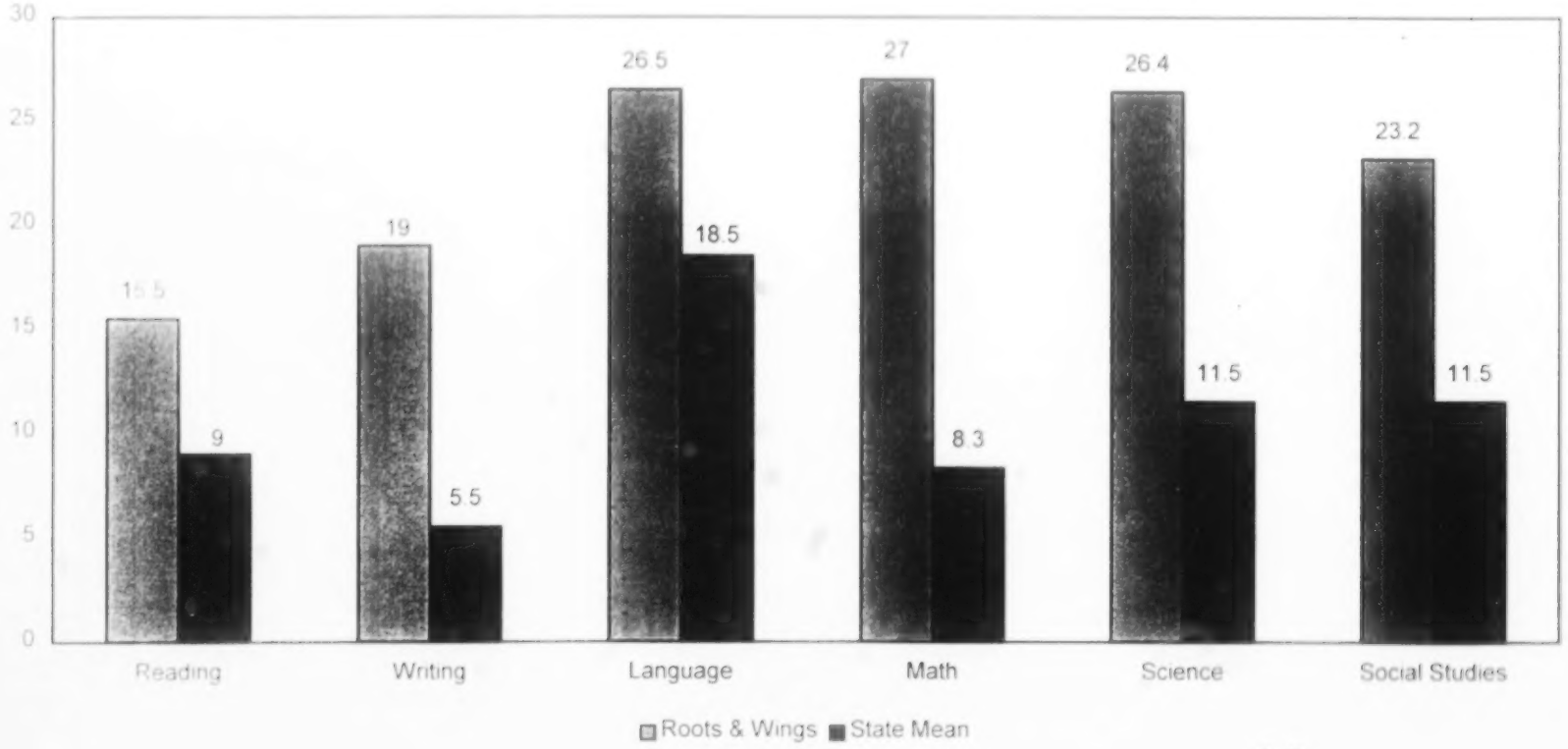


Figure 15
Maryland School Performance Assessment Program
Gains in Percent Scoring at Satisfactory or Better
St. Mary's County Roots & Wings Schools vs. State Means
Grade 3, 1993-1998 (2-year followup)

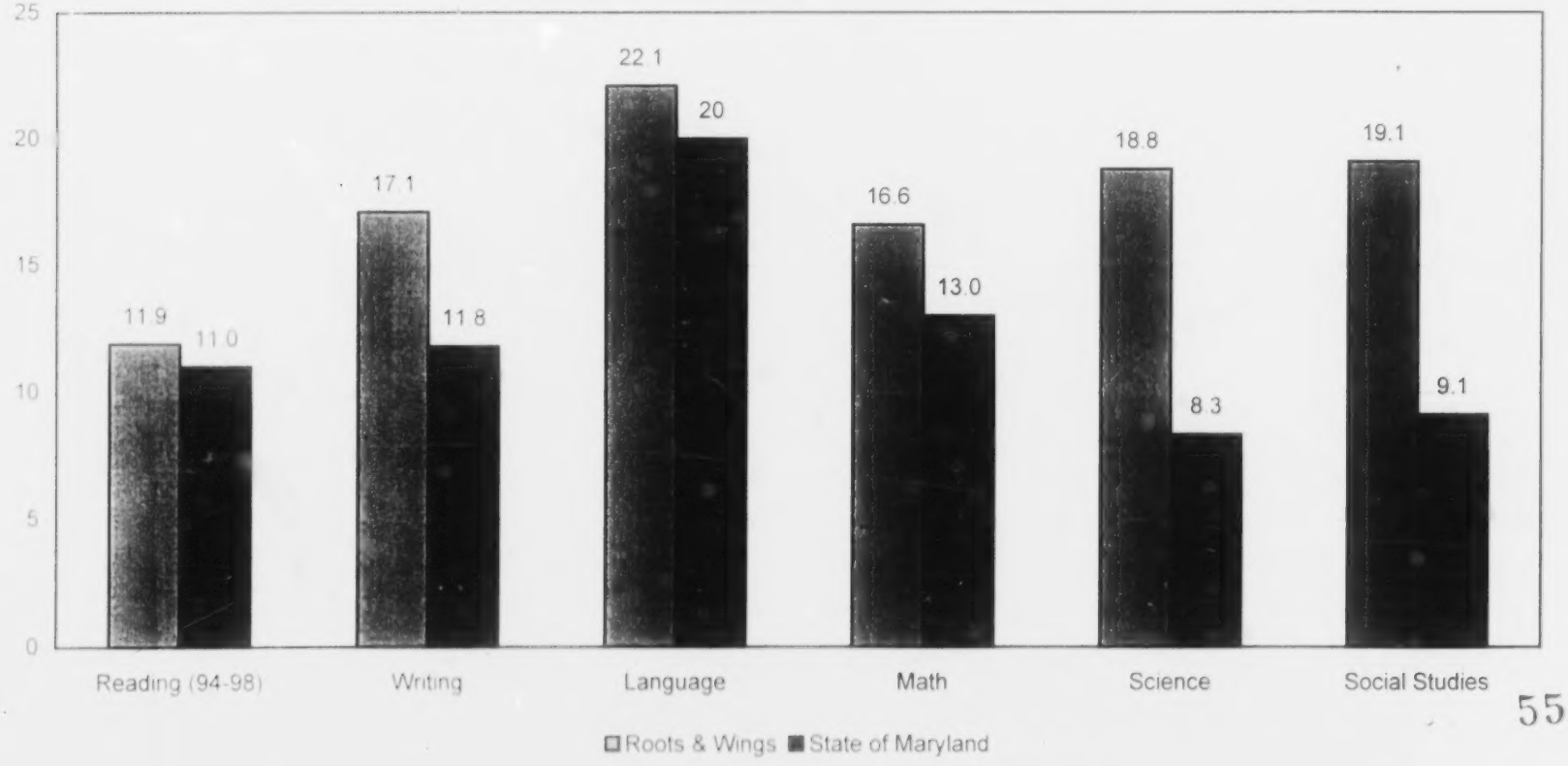


Figure 16
Maryland School Performance Assessment Program
Gains in Percent Scoring at Satisfactory or Better
St. Mary's County Roots & Wings Schools vs. State Means
Grade 5, 1993-1998 (2-year followup)

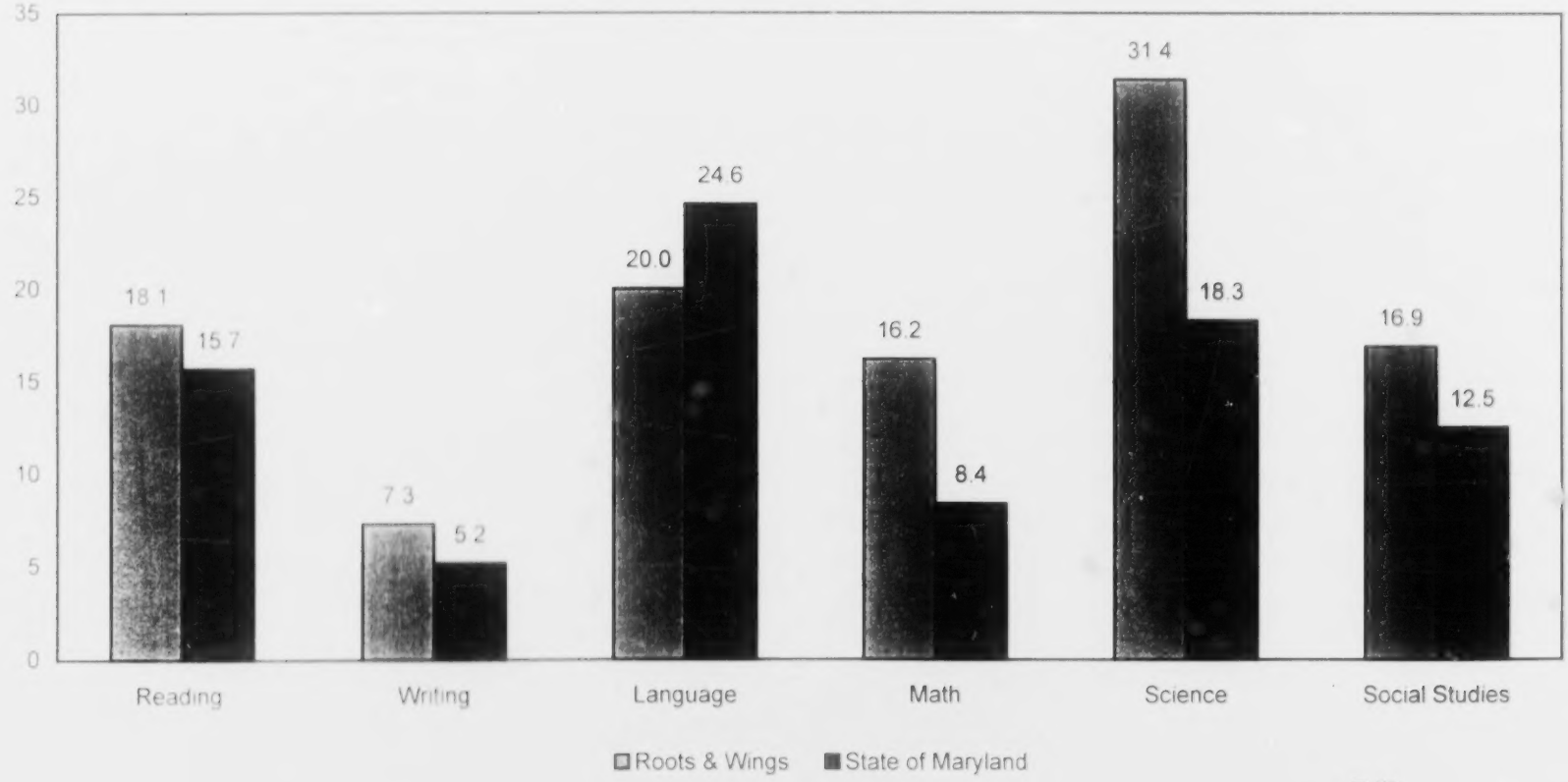


Figure 17
Texas Assessment of Academic Skills
Percent Meeting Minimum Expectations
Roots & Wings vs. Texas Means
Reading, Grades 3-5, 1994-1998

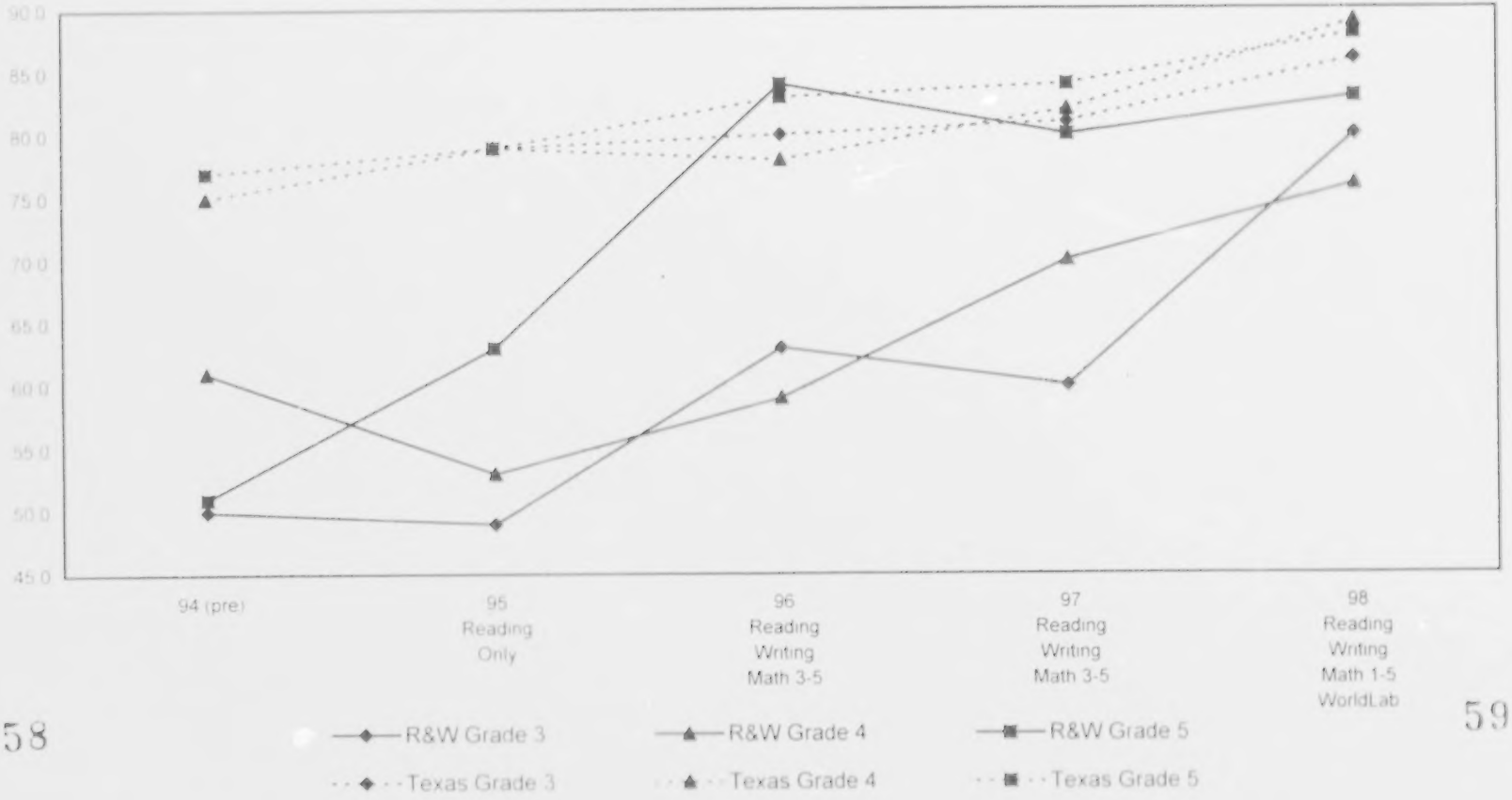


Figure 18
Texas Assessment of Academic Skills
Percent Meeting Minimum Expectations
Roots & Wings vs. Texas Means
Math, Grades 3-5, 1994-1998

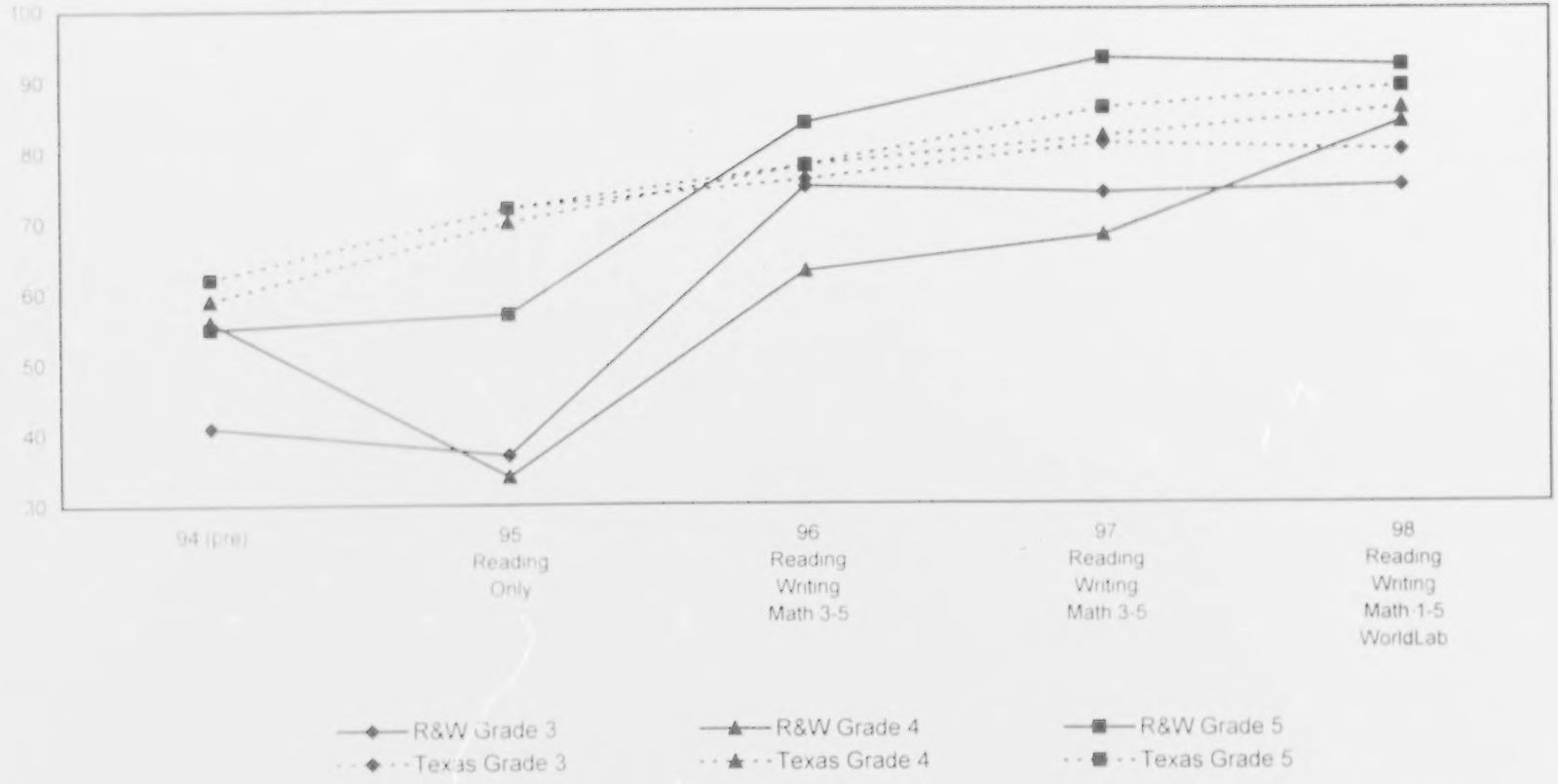


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Figure 19
Texas Assessment of Academic Skills
Percent Meeting Minimum Expectations
Roots & Wings vs. Texas Means
Writing, Grade 4, 1994-1998

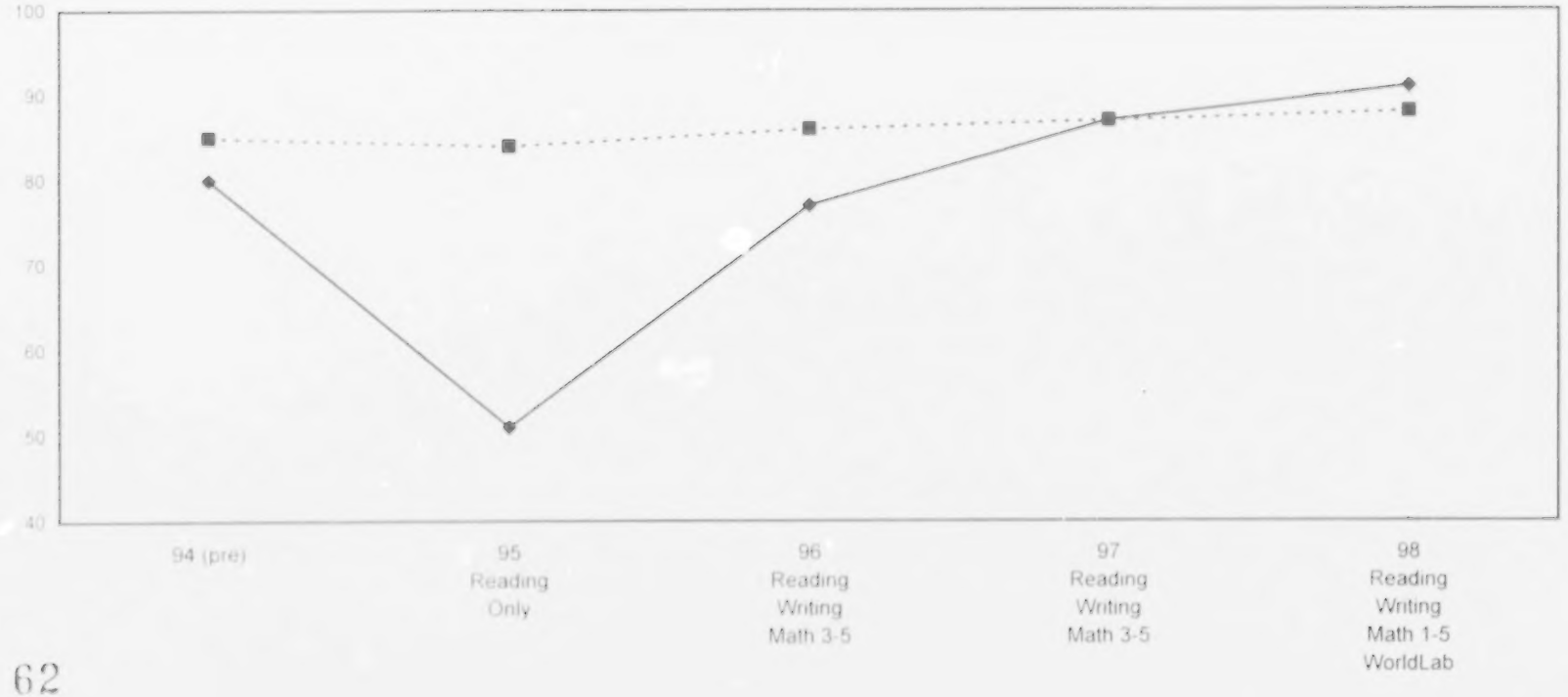
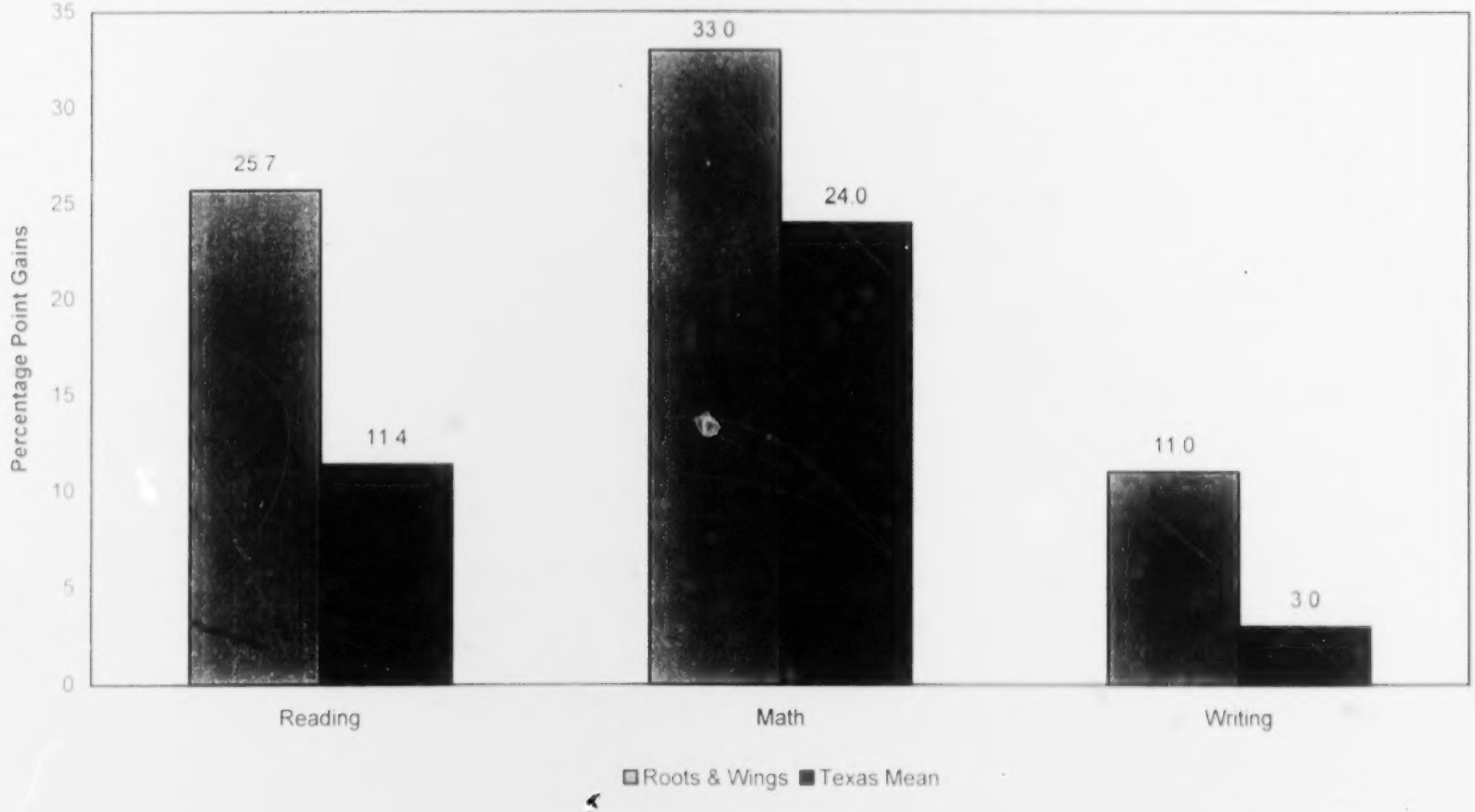


Figure 20
Texas Assessment of Academic Skills
Gains in Percent Meeting Minimum Expectations
Lackland City Elementary School vs. State of Texas



Discussion

The achievement gains seen across the board in both evaluations of Roots & Wings provide strong evidence of the effectiveness of this whole-school reform strategy. The frequently documented positive reading and writing effects of Success for All were also found in these Roots & Wings evaluations. What this analysis adds is evidence that related programs in math, science, and social studies also contribute substantially to enhanced performance in these areas.

Both studies of Roots & Wings also show that the positive effects of this strategy can be seen on the kinds of state assessments that are increasingly being used in accountability programs. Both MSPAP and TAAS are state-of-the-art performance measures intended to assess a broad range of understandings and knowledge. In neither case can it be argued that the measures were especially attuned to the treatments; every school in Maryland is trying to increase MSPAP scores, and every school in Texas is focused on increasing TAAS scores. Yet in both cases, gains in Roots & Wings schools were far greater than those made in the state as a whole as long as the programs were being implemented.

However, the St. Mary's County evaluation of Roots & Wings also shows some of the difficulties of sustaining innovations. During the years when program implementation was relatively complete, scores on all MSPAP measures approached or exceeded state averages, a remarkable achievement in these schools that served many more children from impoverished homes than was true of the state as a whole. When program implementation substantially diminished, scores generally stopped growing. The schools once again fell behind state means, although not as far behind as they were before the program began.

The pattern of substantial achievement gains during periods of high implementation which diminish when implementation deteriorates is remarkably similar to the findings of a study of the Calvert-Barclay partnership in Baltimore, which took place around the same time and used the same MSPAP measures (Stringfield, 1998). This is hardly surprising: if a successful program is no longer implemented, there is little reason to expect that achievement gains would continue to be seen.

What is more surprising is the willingness of schools and school systems in both cases to permit obviously successful (and widely recognized) innovations to fall apart. In the case of St. Mary's County, a number of factors were involved. First, a substantial drop in funding caused key program elements to be dropped, and called into question the district's commitment to the model. Due in large part to internal district politics, Title I programs were never well integrated with the Roots & Wings program. Title I and district funds could readily have

been used to maintain high-quality implementations, but at the point when funding was reduced, there was little sense of ownership or responsibility for the program among Title I leadership, and no one stepped forward to replace the lost resources. This situation was greatly exacerbated by the departure of Dr. Joan Kozlovsky, the superintendent who had brought Roots & Wings into St. Mary's County, just at the point when the district should have been trying to institutionalize the model under its own funding.

The irony in the developments in St. Mary's County is that Roots & Wings, and its predecessor, Success for All, have been far more sustainable in replication sites than in their original pilot sites. Out of about 1130 schools currently in the Success for All/Roots & Wings network, only about two dozen schools have dropped out of the program, but these include the Success for All pilot schools in Baltimore and the Roots & Wings pilot schools in St. Mary's County. The reasons for this are different in each case, but there are some common patterns. Pilot schools almost invariably receive more external funding and attention than do replication schools after the innovation is well established. The school and district staffs often come to believe that these resources are essential to the program, and when they are withdrawn, due to political shifts or difficulties in fund raising, further implementation is unlikely. In contrast, replication sites typically have to fund implementation costs from their own resources, especially from funding sources, such as Title I, that are likely to continue. The experience of Success for All in Baltimore illustrates this well. Among five original pilot sites, two highly funded ("Cadillac") schools dropped out within a few years, when their extra funding could not be continued. In contrast, three "Chevy" schools, which funded Success for All out of existing Title I funds, survived hostile superintendents, policy shifts, funding variations, and other difficulties for nine to ten years, before finally succumbing due to retirements of their principals. Similarly, hundreds of schools outside of pilot districts that never had extraordinary funding have conducted Success for All over periods of 3-10 years, and are still in operation today.

Roots & Wings offers schools a comprehensive means of implementing research-based reforms in all academic subjects and all grade levels. It shows what can be achieved in high-poverty schools willing to undergo and sustain whole-school reforms; these schools can catch up to or exceed the achievement means of average schools in their states. The evidence from the studies of Roots & Wings, and from earlier studies of Success for All, indicate that children placed at risk in ordinary public schools can achieve at high levels, but the reform process must be sustained if the gains that have been repeatedly demonstrated are to be maintained. Districts and schools must decide that excellence is to be the norm in high-poverty schools, not a temporary condition subject to reversal due to political shifts, funding vagaries, personnel changes, or other predictable disasters.

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